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Comments on the Progress of Surgery During the Year 1922

WILLIAM FRANCIS CAMPBELL, M.D., F.A.C.S.

Brooklyn, N. Y.

In a review of the surgical progress for the past year one is unable to discover any contribution of striking importance. Simplicity of technique and refinement of diagnostic methods fairly represent the general trend.

Cullen discusses "*The Abdominal Surgeon of the Future*" (*Surg., Gynec. & Obstet.*, 34:217, Feb., 1922). He observes that the various fields of abdominal and pelvic surgery have begun to overlap so much that every one who ventures to open the abdominal cavity should be trained to handle any situation which may present itself. At present there is too much danger that lesions may be overlooked for want of skill to recognize them. In the future the graduate will first obtain a thorough grounding as an intern in medicine, acquiring experience in autopsies and other pathological examinations in the laboratory. Later he will become assistant, first to a surgeon working chiefly with upper abdominal lesions, and then to a gynecologist, thus acquiring familiarity with the entire field of abdominal and pelvic surgery.

Comment.—In this timely article Dr. Cullen has endeavored to eliminate the "twiddle dee" and "twiddle dum" differences that have emanated from a childish perspective regarding the line of demarcation between the fields of the general and the gynecological surgeon. The erstwhile enthusiastic specialist who sought the seclusion of a small segment of human pathology finds himself in a cramped position unwarranted by anatomical structure or pathological process.

Lockhart-Mummery contributes a timely article "*Discussion on Postoperative Embolism and Thrombosis*" (*Proc. Roy. Soc. Med.*, 15: 23, London, March, 1922).

Deaths from embolism are probably the worst tragedies of surgical practice at the present time, as not only are there no known means of preventing them, but they seem to be on the increase.

From the evidence available it is shown that a relative

degree of stasis in the veins, or at least a very sluggish venous circulation must be present before intravascular clotting could take place as thrombosis does not take place in children, is very rare after operations on the arms, and is most frequent after operations which predispose towards lack of movement in the trunk and lower limbs.

The marked difference in the liability to postoperative emboli between the lower part of the trunk and the upper is explained by the fact that venous circulation in the upper part of the body is controlled by the brain and anything approaching stasis in the big venous trunks of the neck and chest is impossible. However, venous stasis is not the only cause of thrombosis as there is no evidence that mere recumbency or lack of movement would result in thrombosis apart from operation.

Collingwood concluded that some other factor than venous stasis must be present and this he demonstrated to be a substance called thrombokinase. This substance though not present in the blood, was found in varying quantities in all other tissues of the body. A certain quantity is liberated whenever a wound is made, and the contact of the escaping blood with the thrombokinase present in the wound tissues determines the formation of clot which seals up the vessels after a cut.

Therefore, two factors essential to the occurrence of a thrombosis are: a certain amount of thrombokinase in the blood, and a venous stasis.

How can the surgeon prevent intravascular clotting after operations?

The author suggests that preliminary purgation of patients should be entirely abolished: the practice of starving a patient before and after operation should be discontinued; constrained positions during operation should be avoided. After operation the patient should be encouraged to move about and the large mus-

cle masses of the legs, thighs, and buttocks should be massaged in order to promote venous circulation in the cava.

Comment.—Every surgeon of large experience has pondered deeply over this *bête noir* of postoperative accidents—out of a clear sky the convalescing patient is mortally stricken and the surgeon is dumb and helpless in the presence of this disaster. The findings of Mummery should be given thoughtful consideration and further study of this accident encouraged. We may at least hope to prevent even though we cannot cure.

Walterhofer and Schramm suggest "*A New Operative Treatment of Pernicious Anemia*" (Arch. f. Klin. Chir., 118: 794, Berlin, Nov. 24, 1921).

The only operative measure which has so far been resorted to in the surgical treatment of pernicious anemia is the extirpation of the spleen, since the latter has been revealed to be the noxious agent of the pathologic changes. After the operation, there is at first an improvement in the condition of the blood. In many cases the recovery is surprising. But the progress of the pathologic process soon leads to a relapse. These discouraging final results induced the authors to approach the problem of the surgical treatment of pernicious anemia from a different point of view. They proceeded on the assumption that the bone marrow itself is the principal site of the transformations. They considered it a justifiable experiment to remove a portion of the degenerated marrow from a medullated bone, in order to induce the substitution of normal marrow. The patients were prepared for operation by blood transfusions and infusions of NaCl. The operation consisted in opening a medullated bone and in scooping out the marrow with a sharp spoon.

Favorable effects, of a subjective as well as of an objective character, have been achieved in a number of cases.

The authors consider an operation advisable in all cases in which it proves impossible to improve the condition of the blood by any other means.

Erkes commends "*The Surgical Treatment of Ascites, Especially the Tuberculous Form, with Peritoneal Fenestrations for the Purpose of Subcutaneous Permanent Drainage*" (Arch. f. Klin. Chir., 118: 164, Nov. 24, 1921).

Erkes recalls the procedure of peritoneal fenestration in tuberculous ascites, whereby a permanent communication is established between the peritoneal cavity and the subcutaneous cellular tissue by means of an artificially applied opening in the parietal peritoneum. This was based on the supposition that the ascitic fluid would find more favorable conditions of absorption in the healthy subcutis on the one hand, and on the other that the fluid absorbed by the body contained a curative property, similar to that possessed by weakened tuberculin. The experiments of many French authors with injections of pleural exudate justified this assumption.

The author reports the histories of five patients with tuberculous ascites, who were laparotomized by arch-formed incision applied in the midline followed by the escape of the ascitic fluid, and the fenestration was accomplished by the excision of strips of peritoneum and suturing of the peritoneal edge outward, followed by a tight skin suture. In no case did a fistula result, but edema always appeared at the site of operation; in every case a marked improvement in the general condition resulted and there never was a recurrence of the ascites; nor did a postoperative ventral hernia ever form. In one case of peritoneal car-

cinoma, this procedure produced a marked improvement. The toxic effect of the ascitic fluid feared by many others was not seen. This method has the advantage over the usual broad laparotomy, in that it is a less serious procedure and therefore applicable in very weak patients and also that it utilizes the healing powers of the tuberculous acities for the organism. It is still undetermined whether these curative powers are specific or non-specific, or whether the good effect is mainly due to the purely mechanical action of the permanent drainage. Over the permanent drainage by means of foreign bodies, the peritoneal fenestration has the advantage of greater simplicity and also of the avoidance of all the disadvantages which are associated with the foreign body implantation.

Graff makes some valuable suggestions in the "*Surgical Treatment of Sciatica*" (Beitr. z. Klin. Chir., Tübingen, 126: 287, 1922).

Schlösser anesthetizes the nerve by injecting 80 per cent. alcohol, but this is not recommended, as alcohol may cause severe degenerative changes in the nerve and the method requires considerable experience. Moreover, alcohol when injected into the tissues produces inflammation that leads to formation of connective tissue. This tissue may be an additional cause for sciatica, it may aggravate the condition or by compression of the motor fibers it may cause disturbances in motility. Only inert substances should be used in the treatment of sciatica, including saline solution with novocain or stovain. In about 80 per cent. of cases a cure is effected by injections; some cases require several injections. The needle is inserted between the trochanter and the tuberosity of the ischium to a depth of 7-10 cm. until the nerve is reached. There is often severe pain after injection, lasting from a short time, and sometimes fever. The large quantity of fluid is supposed to loosen and stretch the nerve fibers.

Surgical treatment is indicated for removal of tumors or other processes (pregnancy) which constrict the nerve. Bardenheuer devised a radical method for traumatic sciatica (injuries of the bone, osseous canals, adhesions or scars), the operation being known as nervinsarcocleisis. The operation is difficult and radical, and it is impossible to determine whether certain circulatory disturbances are primary conditions or are secondary to the operation.

The author exposes the nerve at its point of exit by a Baracz incision, the operation having proved successful in seventeen cases. The exposed nerve was usually found to be reddened and slightly injected. Exposure of the nerve and moderate stretching is the most certain and safest method for the surgical treatment of sciatica.

Kreysser elaborates a method of treating malignant tumors following the principles of bacterial immunization in an interesting article "*The Failure of Deep Roentgenotherapy and the Significance of Biologic Prophylaxis as an Adjuvant to Operative Treatment of Malignant Tumors*" (Arch. f. Klin. Chir., 117: 97, Berlin, Oct. 17, 1921).

A tumor emulsion is prepared by grinding up 1 gm. of tumor tissue with 8 c.c. of physiologic salt solution. From this stock emulsion a 20% and a 50% emulsion are prepared and the cells killed with 0.5% carbolic acid. Immunization is carried out with gradually increasing doses, 0.2 c.c., 0.4 c.c., etc., of a 20% emulsion being injected under the skin

of the abdomen, until 3 c.c. of the 50% emulsion are reached. The inoculations are made very sixth day, and the duration of a treatment is, therefore, four or five months. No reaction followed the injections. In nearly all cases increase in weight and an improvement in general conditions followed.

Graff and Rauzi report 90% of cures after active immunization.

This method presupposes a radical extirpation of the tumor and an absence of metastases. It is very interesting to note that the recurrent tumors are of a benign nature.

Wood discusses the value of "*Surgery Versus Radiation in the treatment of cancer*" (Long Island Med. Jour., 16:258, June, 1922).

Animal experimentation has shown that tumors exposed to large doses of either radium or x-rays reappear only after long periods of time; hence in judging of radiation results it is necessary to extend the 5 year period. Even without this extension the figures do not in any way equal the final results of surgery. It is as yet impossible to judge whether permanent cures of any malignant neoplasms except basallcell tumors of the skin are obtained by radium or x-rays.

In the future, in all probability, inoperable neoplasms will be treated by radiation only, but with our present information all operable tumors should be treated by surgical removal. Wood wishes surgeons would attempt to develop the cautery knife, which has many theoretic advantages, despite its practical inconvenience. He disapproves any attempt at speed in a surgical operation on a case of cancer. Unless the surgeon remembers that the only time to operate is the first time, and that a secondary operation is always a confession of incomplete removal of the primary growth, the public will drift to the radium and x-ray therapist, preferring palliation without surgery to palliation with it. Those patients to whom surgery offers but little hope should be transferred to some competent radiotherapist. With increased knowledge of the methods of radium application and the development of high voltage x-ray machines, there is going to be in the near future a great improvement in the radiation treatment of cancer. The surgeon instead of opposing this should do everything he can to make himself familiar with the methods and results, and thus to raise the standards of tumor therapeutics.

The question of the value of preoperative and post-operative radiation of the entire surgical field is generally impractical, as poor healing of the wound will inevitably result. Intensive raying of the growth only with very heavy doses lethal to all tumor cells exposed, is a possible procedure, but only in tumors near the surface in which the growth and entire radiated skin area is excised within 24 hours. Postoperative raying, when properly done, in the opinion of many reliable radiologists produces important results, and, as it supplements the work of the surgeon, should never be omitted. Both x-rays and radium are valuable; each has its special field. The new high voltage machines have come to stay, but they are effective only as giving large amounts of radiation of extremely penetrating quality, and not because they kill cancer cells with fewer erythema doses. Just so many skin erythemas are required to kill the cell no matter what the voltage or filtration.

Comment.—The statement that cancer is curable does not imply that every cancer is curable. Like pneumonia, there are various types of cancer, and when we are able to

"type" our cancers as we "type" the pneumonias, we shall find not only certain types of cancer are curable. In the meantime, the attitude of the physician should be one of constant supervision. *Once a cancer patient, always a cancer patient.* After operation the cancer patient should report to the physician at regular intervals, for thereby many metastases and local recurrences will be discovered in time to receive effective treatment.

Skilern ventures a new procedure in "*The Choice of Operation in Inguinal Hernia*" (Surg., Gynec. & Obst., 34:230, Feb., 1922).

He describes an operation for inguinal hernia which includes reconstruction of the posterior wall of the canal. It consists in rolling up a cylinder of musculo-aponeurotic tissue of the internal oblique layer, mesial to and above the conjoined tendon and the lowest internal oblique muscle fibers, and in suturing this cylinder to the ligaments of Gimbernat and Poupart, from the pubic bone to above the internal ring. The lower flap of external oblique aponeurosis is then sutured to the cylinder, and the upper flap then sutured to the surface of the lower.

The cord is brought out lateral to the original ring and left superficial to the imbricated external oblique flaps.

The type of sac is a factor in determining whether or not this reconstruction is necessary. The long narrow sac of a congenital hernia in young or well-muscled individuals, need only be ligated without reconstruction of the posterior wall, the internal oblique muscle usually being capable of standing strain. "Sessile" sacs of direct hernias need not be ligated at all, but posterior wall reconstruction is essential.

Comment.—The value of this article is not in the novelty of procedure, but in the intimation that the surgeon is no longer beholden to any fixed operative procedure for all hernias. A closer study of the hernia problem suggests that uniformity of operation will only result in the largest percentage of failures. Cures are to be obtained by varying the operation to fit the mechanical and anatomical problems which each individual case presents.

A number of contributions have been made to the treatment of empyema. Many of these emphasize the advantage of catheter drainage introduced through a previously inserted trocar after the method of Mozinga. We are convinced that these newer methods born of an enthusiastic endeavor to solve the trying problem of a war-epidemic of empyema have only served to enhance the value of sound surgery and fundamental principles.

The pre-war treatment of empyema by thoracotomy, evolved through many years of experience, has not been shaken by any of the fads and fancies developed during the war. Nevertheless, through our war experience we have progressed to a finer appreciation of the indications for operation; and our mortality will show an appreciable reduction as we regard the conclusions of the Empyema Commission: aspiration only until, first, there is absence of pneumonia; second, presence of frank pus; third, a walled-off cavity to protect the mediastinum and the opposite lung from the evil effects of an open pneumothorax.

Conclusions.—While the year is marked by no epoch-making contribution, there is a noticeable refinement of technique in all branches of surgery. The hope of a cancer cure is inspired by the activity of investigators along the lines of immunization. There are grounds for believing that surgery may add pernicious anemia to the list of curable diseases.

394 Clinton Avenue.

The Progress in Internal Medicine During the Year 1922

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After reviewing the enormous advances in internal medicines which have been recorded during the past half century (MEDICAL TIMES, 1922, Vol. L p. 1) it would seem that the contributions of the past year were comparatively unimportant but it should be borne in mind that the former record is the accumulation of fifty years and is made up of small increments of progress. So it is that what may appear as a minor advance may so influence the lines of thought that they must be rectified and consolidated throughout their entire length, thus making for distinct and productive progress in the alleviation and cure of the diseases which are harassing mankind.

Browning, while conceding, that progress has been made in the treatment and after-care of patients suffering from epidemic poliomyelitis, very properly states that the best treatment is preventive. During seven years observation of patients admitted to the hospital there appears to be sufficient evidence that there should be no fear of contagion. During the epidemic of 1916 the sanitary policy in vogue was based upon quarantine, isolation, removal by force to hospitals, separation from their parents and a general campaign of frightening the public. In support of these measures was the theory that cord-involvement was effected by the nasal-arachnoid route and that the nose is the main distributor of infection and in consequence the relative ignoring of the dejecta, previously suspected and still to be regarded as a main source. The clinical evidence is in favor of the gastro-intestinal tract and the general circulation, the usual pronounced signs attributed to this tract being so fulminant in character as to be almost, pathognomonic. The conclusion to be drawn is that it is imperative to apply disinfection to material from bowels, stomach or bladder, the same as in instance of dysentery and enteric fever and the same methods of control which are applied in the latter disease are the best, but may be modified to meet especial needs. Foods, insects and the dejecta from the patients, being the probable sources of infection, the control becomes a matter of individual protection and public prevention with comparatively simple methods of procedure.

Porter, in discussing the chemistry of phosphorus in brain activity, states that this substance in combination with sodium serves the physiological economy in three distinct processes; (a) In relation with the digestive functions, the tri-sodic phosphate is acted upon by the hydrochloric acid and connected with (b) a disodic monohydrogen phosphate, which is the true alkalinizer of the body fluids and tissues, a high degree of alkalinity being essential to perfect oxidation and assimilation and (c) after this substance has served its purpose in the body it is excreted through the kidneys, where it meets a molecule of uric acid and is transformed into the acid monosodic dihydrogen phosphate which is the true acidifier of the urine. The author has contended for years that the oxidation-reduction takes place in the fixed cells only, as found in the various body glands, and not in the body tissues and fluids; that this process, in a large measure, constitutes the biologic activity in the

cells. In connection with this process and exact place at which it occurs, it should be remembered that the ganglion cells of the nervous system are large masses of protoplasm resembling in composition, but not in shape, the cellular structures of the glandular organs, and that, in all probability they are the place at which the complex phosphorus-bearing bodies are oxidized and reduced. Active working of the central nervous system is always accompanied by increased elimination of alkaline phosphates, which fact tends to support the theory that these phosphorus-bearing bodies are oxidatively reduced in the cells of the central nervous system. Hence elimination of the alkaline phosphates indicates simply augmented physiological activity of the nervous system while over-elimination of earthy phosphates in a highly acid urine denotes a mal-nutrition involving chiefly the nervous mechanism. The solution of the problem of converting complex phosphorus-bearing bodies into energy and phosphates and how they pass out of the system is plain if it be accepted that the protoplasmic masses of the central nervous system have power to oxidatively reduce this class of bodies. For instance, in these cells lecithin, for example, is reduced to sodium phosphate, urea, carbon dioxide and water. Phosphorus can be utilized by the physiological economy even when in a pure organic combination because there is no acid within the body sufficiently powerful to liberate it when in combination with any other organic substance. It is true that disodic monohydrogen phosphate is changed to monosodium dihydrogen phosphate by the uric acid but both uric acid and the former phosphate are excretory products and are therefore outside the system. From these facts we may expect definite results when a phosphorus atom is administered in a pure organic combination.

Blake, in a carefully conducted investigation of the source of infection in pneumonia, believes, that it is reasonably certain, even in the absence of more direct evidence, that it is due to the pneumococcus types I and II from patients suffering from pneumonia caused by the corresponding organisms, either directly or indirectly through infection from dust derived from the immediate environment of those sick from the disease. Inasmuch as about sixty per cent. of pneumonias are associated with these organisms it would appear that this is not due to an autogenous infection as formerly had been supposed. The study of apparently related instances of pneumonia, as detailed in three instances, furnished more direct evidence of the communicable nature of the disease. In the instances cited the evidence is definite because not only was the source of infection, from a patient suffering from pneumonia, demonstrated but also it has been shown that shortly before the onset of the disease none of these individuals carried in his mouth the type of pneumococcus causing the disease, thus excluding the possibility of an autogenous infection. Pneumonia of the above types then should be regarded as a communicable disease but not a highly contagious one as measles, scarlet fever or small pox. The explanation of this statement may be found in the fact that the pneumococcus, although preserving a high degree of virulence, ap-

parently has a comparative slight primary invasive power, in this respect being comparable to the meningococcus but in exact contrast to the virus of measles for example, which possesses a high degree of primary invasiveness but comparatively little virulence. It seems altogether probable, at least to a considerable extent, that pneumonias caused by the other types of pneumococcus also must be regarded as communicable diseases. The source of infection of the secondary pneumonias which occur are complications of whooping cough, measles, influenza and other conditions is much more difficult to determine for obvious reasons, especially the failure of laboratory methods to determine whether those strains of bacteria associated with pneumonia differ from those found in the mouths of normal individuals. The probability is that these pneumonias are due to contact rather than to autogenous infection although there is equally suggestive evidence that the latter frequently occurs and probably plays an important rôle in their causation. The evidence in respect to secondary hæmolytic streptococcus pneumonia is even more suggestive, that it is largely due to contact rather than to autogenous infection, although there is considerable difference of opinion. For pneumonias of the types I and II it appears desirable to practice as rigid isolation and quarantine measures as are now employed for epidemic meningitis or for diphtheria and it may be prudent to insist upon the enforcement of isolation until convalescents have been demonstrated to be free from the presence of the pneumococcus. As for the secondary pneumonias and especially for those due to the hæmolytic streptococcus the evidence in favor of contact infection is sufficiently convincing to justify the strict enforcement of the same measures with the hope of at least accomplishing something toward the prevention of these frequent and serious respiratory diseases.

Barr, Cecil and DuBois note that the treatment of arthritic patients by means of intravenous injections of foreign protein has produced chills which resemble malarial paroxysms and suggest that calorimetric observations may give important information concerning the temperature regulation after the intravenous injection in protease and typhoid vaccine. It was found in malaria that during the chill the heat production was enormously increased while the heat elimination remained practically at its basal level. After injection of foreign protein the same mechanism is observed while after vaccine, the heat production is increased from 75 to 210 per cent., while the heat elimination is scarcely increased above its former level. This results, of course, in the storage of large amounts of heat in the body. During the high continuous temperature the heat elimination increases until it equals heat production, both being 20 to 40 per cent., above normal and during the fall in body temperature the heat production gradually approaches the basal level while the elimination steadily increases. The general conclusions are as follows: (a) experiments upon eight subjects have been made, five presenting the phenomena of chills. (b) The results follow very closely those noted above in the patients suffering from malaria, noting also that after the heat production has reached the normal level the heat elimination increases still further until the stored heat is eliminated but during the falling temperature there is never so large a discrepancy between elimination and production as during the chill. (c) During the chill the respiratory quotient tends to be high, indicating the rapid combustion of glycogen stored in the body, but after it, the quotient steadily falls. (d) The rectal temperature, in a general way, indicates changes in average body temperature, but it is possible to have a

rise in rectal, while there is a fall in the average body temperature and the opposite also is true. (e) The heat lost in the vaporization of water from the skin and lungs bears a fairly constant relationship to the total heat elimination but has none to the heat production during rapid changes in temperature. There is no evidence that the body is unable to mobilize water for heat elimination nor should fever be attributed to failure in the function of water elimination. Observations in this and other fevers has demonstrated that rise in body temperature is accompanied by increased heat production, the amount of which corresponds to the degree of fever. This increase follows van't Hoff's law with a rise of 18° F. (10° C.), the velocity of chemical reaction increases between two and three times. The final conclusions are that the phenomena of the chill following intravenous injection of protease or vaccine are, as has been premised earlier in this review, strikingly similar to those of the malaria paroxysms, the method of temperature regulation being almost identical.

Bass states that it is now a fact that the intestinal flora can be transformed from the usual mixed type to a simple one considering chiefly of bacillus acidophilus, a natural inhabitant of the intestinal canal especially of young healthy persons, at the same time greatly reducing the proteolytic bacteria or eliminating them entirely. By transforming the flora it should be possible to determine whether the many symptoms, diseases and conditions, including premature senility, commonly believed to be due to intestinal intoxication, are really due to it. Finally, if any are proven to be caused in this way, a promising remedy will be at hand.

Gompertz and Vorhaus from their clinical studies conclude: (a) The bacillus acidophilus when given by the mouth can and does implant itself in the intestinal tract. (b) Its administration is accompanied by a marked decrease in the number of bacillus coli in the feces and the supplanting of these by the bacillus acidophilus. (c) In chronic constipation there is a marked improvement from the so-called toxic symptoms and relief from the constipation which co-existed. (d) In the chronic diarrhoeas there was an abatement of the symptoms.

Cecil, Barr and DeBois, after pointing out that most instances of arthritis are infectious in origin yet some, especially in the chronic forms are believed to be expressions of metabolic disturbances although the results of a reduced nitrogenous diet have not been encouraging and even a lowered carbohydrate intake has been advocated, make a distinct contribution towards a solution of the problem in their calorimetric observations on the metabolism of arthritis. They summarize their conclusions as follows: (a) Three instances of acute and sub-acute arthritis showed no variation from the basal metabolism. One instance, during a continuous temperature of 101.2°F. (38.4° C.) showed a basal metabolism 26 per cent. above the average normal level. Other observations on the same patient during afebrile periods exhibited a metabolism practically within normal limits. Here there was a marked loss of body nitrogen during a period when the energy requirement was more than covered by a liberal diet indicating a toxic destruction of body protein. (b) One instance of gout showed little change in the level of basal metabolism. (c) Four instances of severe arthritis deformans on a very low in protein but high in calories, the Landergren diet, excreted from 40 to 56 gr. (2.6 to 3.6 gm.) nitrogen, amounts which are well within the normal limits. Three

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Review of Dermatology During the Year 1922

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Inasmuch as the last year's review was an historical exposition covering the past half century in dermatology, the authors take the liberty of including in the present outline a few of the more important articles of 1921. On the whole there is evidence of a pleasing revival in the quality of dermatological work ahead. The cloud of lassitude following the war seems to be lifting rapidly, and it is gratifying to us in America to note that we can again look to Europe for the inspiration without which our own progress must needs have suffered in the long run. We regard this restoration not with envy but with the pleasure inherent in the realization that, after all, the folly of statesmen cannot exterminate the vitality of the scientist.

New instruments of precision are uncommon in the field of dermatology: Saphier¹ has modified the slit lamp, used for some years by ophthalmologists, so that it is possible to examine the living skin under conditions of illumination and magnification not previously available. The magnification is between X40 and X67 and, by a method of clearing, it is possible to study the cutaneous circulation. The method is still in its infancy but should form a link between the gross and the microscopic examination of lesions. Michael,² in this country, is working with the new instrument, and thinks it will be of great assistance in diagnosis when the studies now being made are correlated.

The significance of Bloch's³ work with a new stain for pigment cells has aroused considerable discussion. It is in connection with this work that the term "dopa" has been coined. "Dopa" is an abbreviation for dioxyphenylalanine, the name of the stain Bloch uses. As a result of his investigations he believes that pigmentation in higher mammals is of epidermal origin, produced by the action of an oxidase on some substance similar to "dopa" or identical with it. Exposure to sunlight, x-ray and irritants hasten and increase its production.

This work has aroused considerable interest in the formation, distribution and displacement of pigment, and two articles, one by Almkvist⁴ and the other by Michelson⁵, discussing leucoderma occurring in pityriasis lichenoides chronica are well worth re-reading.

The elastic tissue of the skin has been studied by Kissmeyer and With⁶: they conclude that different types of elastic tissue degeneration cannot be separated histologically, and that morphologic classification is impossible. Etiologically they recognize (a) diffuse senile degeneration, (b) pre-senile degeneration—of newly formed elastic tissue in scars, (c) pseudoxanthoma elasticum and (d) the small elastoma seen now and again in tuberculous and syphilitic lipoids.

A painstaking study of the tissue reaction occurring in malignant epitheliomas of the skin by Parkhurst⁷, results in some interesting generalizations which should be of assistance in prognosis of cases submitting to biopsy.

Following the work done in the last two or three years at Wile's clinic at Ann Arbor, which proved the possibility of reproducing the lesions of molluscum contagiosum and of verruca plana by means of extracts obtained from lesions and passed through germ proof filters, Vengi⁸ has succeeded in producing lesions in the cornea of rabbits by inoculating the contents of the vesicles of herpes labialis. These lesions can be indefinitely repeated. Eighty-three per cent of inoculated rabbits die of encephalitis, and brain material from these casualties, when inoculated into

the cornea of other rabbits, may again produce the condition. Surviving animals develop immunity. He concludes that the virus is a filterable organism destroyed at 50° C.

de Silva⁹ seems to have settled the etiology of "dhotie itch" by producing the disease in a typical form following the inoculation of a culture of epidermophyton rubrum (Castellani, 1909). Yeast infections of the skin have been studied by Greenbaum and Klauder¹⁰ who find that some lesions clinically indistinguishable from dermatophytosis are due to the presence of certain yeasts. They describe the more constant findings and state that most cases are cured by the application of ten per cent tincture of iodine and by keeping the involved parts dry. Ota¹¹, after a careful study and comparison of cultures, thinks that the trichophyton purpureum (Bang), the epidermophyton rubrum (Castellani), the trichophyton "A" (Hodges), and the trichophyton rubrum (Priestley) are identical. If this observation is accepted a welcome simplification of the nomenclature of the skin fungi is possible. Unfortunately Ota does not say which name should be used to identify the particular fungus.

This matter of the simplification of nomenclature presses. Any suggestion for combining synonymous titles under one generic name, or for dropping obsolete terms and artificial distinction should be welcomed by dermatologists. Pulay¹² believes that prurigo, strophulus and urticaria belong to one group of diseases, pruritus being the cardinal symptom. He proposes that these diseases be grouped under the heading "the pruritus of childhood." This suggestion recalls the mother who brought her itching child to a dermatologist; he diagnosed urticaria papulosa and prescribed treatment. The mother then said that she had previously consulted another skin specialist who had diagnosed prurigo and pronounced the case incurable; she had not mentioned this fact before because she wished the unprejudiced opinion of the second man, but now that he had given her three prescriptions she did not care to enrich some druggist if her child's condition was indeed incurable. In this unwelcome dilemma the dermatologist did some quick thinking and assured the mother that he was right in his diagnosis, that the disease was obstinate, but curable and had her put the child under his skillful care. After a considerable time the mother decided that improvement had not occurred and went back to the skin specialist who pointed out to her that his original diagnosis had been confirmed by the course of events and that she could now see she had been wasting time and money on the dermatologist.

The mother watched her child scratch for some time and then returned to the dermatologist carrying with her the dictum of the skin specialist and demanding the truth. The dermatologist thumped his chest, recounted his years of experience, his many hospital connections and his society affiliations. He assured the distracted lady that by no possible chance could he be mistaken in his diagnosis and that the condition was curable, but slow—very slow. He again gave a sheaf of prescriptions and sent the patient away with an appointment slip. In desperation the lady took the child back to the family physician and told her story. The doctor turned to his library and, after consulting several books, explained to the mother that as far as he could learn the two names meant the same thing and that if the disease ended when the child reached the age

of twelve the dermatologist was right, but if it persisted the skin specialist was the winner. The latest textbook says: "Obviously prurigo must be differentiated from infantile prurigo, an impossibility until the end of childhood."

Kerr¹⁸ proposes a welcome simplification of our cumbersome list of diseases by advocating dropping the term "gangosa." He thinks the condition known by that name due to either the *T. pallidum* or to the *T. pertenue* and that gangosa is either tertiary syphilis or tertiary yaws.

The etiology of lupus erythematosus has been a perennial source of discussion for a generation. The advocates of the theory that it is due to tuberculous toxins have been illustrious and vociferous. At rhythmic intervals a series of autopsy reports showing foci of tuberculosis in defunct sufferers from lupus erythematosus is published to prove their contention. The fact that tuberculous lesions can be found in some 95 per cent of autopsies on adults does not prevent the triumphant addition of Q. E. D. to these papers. Almost as insistent, though lacking the unanimity of purpose of the first group, are the advocates of focal infection, intestinal toxæmia, etc.

In this connection two papers are of more than passing interest. The first comes from the Mayo Clinic, and in it Goeckerman¹⁴, has made a real attempt to determine, by the examination of a large series of complete case records, whether the association of lupus erythematosus with tuberculosis is more frequent than in other admittedly non-tuberculous dermatoses. He concludes that there is no such increase in frequency as one might expect from the literature. While the paper is not final it points the way to end a seemingly endless discussion begun on clinical observation and perpetuated by nothing sounder than assertion. The second, a lecture by Unna,¹⁵ attributes the tissue changes in lupus erythematosus largely to lack of available acid. He does not consider tuberculosis the probable cause of the condition and wishes the term lupus erythematosus discarded as being obsolete and misleading. He favors the use of the term *ulerythema centrifugum*.

This lecture of Unna's recalls the difficulty experienced in changing a name to which readers have become accustomed. Dr. Johnson said: "A man coins not a new word without some peril and less fruit; for if it be received, the praise is but moderate; if refused the scorn is assured." Unna proposed the term *ulerythema centrifugum* instead of lupus erythematosus some twenty-eight years ago, and although it is undoubtedly a better name it has not yet been adopted.

A much needed bit of thankless work was done by Cole and others¹⁶ when they showed by exhaustive tests that inhalations of mercury are not a useful method of treating syphilis and are likely to produce toxic effects without any gain in therapeutic efficacy. Investigations of this type should be made more frequently to check the extravagant claims of exploiters of new methods and preparations in the treatment of disease.

Probably the most notable publication of the year in dermatology from the standpoint of therapeutics, is McKee's¹⁷ book on the use of x-rays and radium in skin diseases. The work represents the crystallization of the experience of a master with a genius for painstaking experimentation and standardization. With the appearance of this book better results should be obtained by the expert and fewer lamentable accidents should follow the attempts of the tyro. Highman and Rulison¹⁸ propose the adoption of the symbol "M" to represent the erythema does as standardized by McKee. They hope this suggestion will be generally adopted both to avoid confusion and as a well-deserved tribute to McKee.

Hollman¹⁹ reports his results in the treatment of leprosy by the use of the fatty acid esters of chaulmoogra

oil; he feels that, while the claim of cure is premature, the results are very encouraging. Symptomatic cures lasting three years have been obtained.

Two or three years ago Teague showed that the bacillus of Ducrey could be grown in pure culture in clotted rabbit blood. Since that time Stumpke²⁰ has made a vaccine which, he reports, produces active immunization and hastens the healing of chancrous lesions. Cheinisse²¹ refers to the work of Stumpke and says that similar work has recently been done at Stockholm with equally favorable results.

The intravenous injection of from eight to fifteen gms. of grape sugar in 30cc.—50cc. of distilled water, given every second day, causes marked and permanent improvement, according to Scholtz²² in fresh eczema, toxic exudative dermatitis, resistant exudative erythema and pemphigus; he also finds it helpful in chronic eczema and acne. Scholtz attributes the improvement noted to protoplasmic activation of the tissues.

Much work has been done during the past year or two on the laboratory diagnosis of syphilis. The long series of articles by Kolmer²³ on the standardization of the Wassermann test represent tremendous effort. It is to be hoped that Kolmer's recommendations will be generally accepted and the test standardized. Meanwhile there is much discussion of other laboratory tests for the disease. The French have always objected to the use of the German name "Wassermann" and now are beginning to employ the term "Sigma" test as a substitute. Some confusion is likely to arise from this choice of title because the English are using this name to designate a test, somewhat like the Sachs-Georgi and Meinecke reactions which is described by Dreyer and Ward²⁴ and tested out by Rook²⁵ and by Collier²⁶ with favorable results. Here in America, Kahn²⁷ has offered a simple quantitative precipitation reaction which seems to have real merit and great simplicity. Young²⁸ is reporting both the Wassermann and Kahn tests on all specimens examined by the Michigan State laboratories.

In the therapy of syphilis the use of bismuth salts is the most noteworthy contribution. Sazerac and Levaditi²⁹ proposed this treatment; continued use has resulted in a number of favorable reports. The preparations used, are various but most of them are based on the original preparations of the tartrobismuthate of sodium and potassium as proposed by Levaditi and Sazerac. In general those who have tried the drug, usually given intramuscularly in oily suspension, agree that it is of real service, that it may be used in all stages of the disease, that its action is rather slow but permanent and that its greatest field of usefulness lies among cases which do not tolerate the older forms of antisyphilitic treatment or which are resistant to their influence. In old Wassermann-fast cases, which have long been a difficult problem, some encouraging results have been obtained. The numerous modifications of the drug that are being tried are the outcome of the unfortunate stomatitis and other toxic effects that are often encountered. Recently colloidal bismuth in oily suspension has been used and favorable results reported. Apparently a valuable addition to our therapeutic repertoire in syphilis has been discovered and the details of its use are being rapidly worked out.

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Progress in Otology, Rhinology and Laryngology During 1922

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The year 1922 has been marked by no little progress in the field of rhinology and laryngology. Especially notable are the advances in plastic surgery and endoscopy. No longer must the few pioneers in these fields carry on their work unaided. There are able pupils in almost every section of the country, but there is always danger lest the unskilled and untutored attempt that which is beyond their reach, and in doing so, fail to attain results which will justify their work. Only the ingenious, imaginative and skilled operator should choose these fields as his proper work-ground. Sheehan (1) describes a new procedure for the relief of depression of the nasal bridge. Under local anesthesia, a vertical incision is made through the center of the columella from the tip of the nose to the philtrum, and deepened throughout until the septal cartilage is reached. A bed is now made for reception of the graft, by separating the loose tissue of the nose on each side of the nasal bridge up to the infra-glabellar region; cartilage is taken from the right chest wall, the length of which may be determined by measuring the distance from the infraglabellar region to the nasal tip, and from the tip of the nose to the deep tissue of the upper part of the philtrum. A triangular piece of cartilage is excised from the proximal end of the graft for the purpose of bending it to a right angle. The short end of the transplant is sutured to the deep tissue of the upper part of the philtrum to prevent tension upon the sutured columella during healing. As a rule no bandaging is required.

For humps and deflected noses, the same incision is used, but it is not necessary to extend it so deeply. After separating the periosteum from either side of the nasal bones, the hump is removed with the aid of the author's special chisel, and the raw surfaces of the bone are polished with a rasp. For the plastic repair of the syphilitic nose, one must have a proper lining, a covering, and a supporting frame. The lining may be provided by the use of a Thiersch graft wrapped around a model of stent. If the loss of mucous membrane is extensive, a pedicled flap from the skin of the forehead may be employed to better advantage. The covering of the nose may be best undertaken by use of skin of the forehead. The supporting frame should be of chondral cartilage.

Hay fever and asthma have again held the attention of the rhinologist, and with good reason when we consider that about one million persons in this country alone are susceptible every year. J. S. Brown (2) states that one-half of all cases of bronchial asthma are proved to be due to sensitization to some foreign protein. The sensitive asthmatic can usually be completely relieved of all attacks by elimination of the affecting protein from his environment, by specific protein therapy, and proper vaccines, or a combination of both. The affecting protein can usually be detected by the cutaneous tests, which method of diagnosis is far better than the intra-cutaneous, as it is practically painless, easy of interpretation, specific, and a gauge of the progress of treatment. Seasonal hay fever is nearly always due to sensitization to a pollen protein, whereas perennial hay fever may be due to sensitization to any form of protein. Preseasonal treatment is by far preferable to coseasonal treatment. Other dis-

eases, as urticaria, angio-neurotic edema, eczema, dermatitis, colds, etc., may be due to protein sensitization. De-sensitization in any case is not permanent. The antigen must be administered each year. Clock (3) reports that the average relief from symptoms for 1578 cases reported in five years was 84%. Asthmatic symptoms were either prevented or rendered mild in 82% of 789 cases in which they were related to hay fever.

We have yet to solve the problem of ozena. Perez (4) considers the *cocco bacillus-fetidae-ozenae* the specific microbe of the disease and that it is directly contagious by contact either from person to person or from dog to man. Patients should be taught the ordinary precautions used to prevent the spread of any contagious disease. Caldera (5) has advanced the theory that the disease is due to a special general lymphatic condition, which gives favorable soil for the development of ozena bacteria. After stimulating the membranes for a period of six months he uses submucous injections of white vaseline with success. Recently Galotte has found lymphocytosis in ozena.

Maybaum (6) classifies cases of hyperplastic conditions of the ethmoid cells into three groups: The superficial, hyperplastic ethmoiditis with polypoid hyperplasia of the mucosa of the middle turbinate and middle meatus. 2. Deep seated hyperplastic ethmoiditis, non-suppurative, involving the lateral mass of the ethmoid. 3. Deep seated suppurative ethmoiditis with numerous ethmoid cells filled with pus and otherwise similar to the non-suppurative type. The treatment includes thorough curettage of the ethmoidal cells until healthy bone is reached. Earlier cases may require partial removal of the ethmoid cells, especially of the anterior group, but usually complete exenteration is necessary. In the earlier stages (hypertrophic rhinitis) drainage and ventilation of the ethmoid and other sinuses is necessary. Deviated septa and hypertrophied turbinates require correction. In the more advanced cases, removal of the anterior ethmoid cells with a curet and punch forceps is necessary. If the underlying bone is healthy, simple snaring of the polyps is sufficient. The diseased cells are removed until the thin, whitish membrane lining the normal ethmoidal cells is seen. The Mosher operation is ideal. A thorough knowledge of the anatomic relations and pathologic changes is essential. The after-treatment includes the avoidance of packing in the nose and leaving the nasal cavity alone for three days when it is cleansed with a warm alkaline solution. Polyps that have escaped removal may be removed later under cocaine.

Among the new instruments described during the past year is Bishop's (7) spoke-shave (a modification of the Cavanaugh nasal shave) which is used for the resecting of the internal wall of the maxillary sinus. It is pointed and curved so that it can be introduced in the proper direction. Bishop states that the main reason why the opening in the antral wall closes so frequently is because in performing the resection, the mucous membrane lining the antrum is not cut out neatly with the bone but is rather pushed before the entering instrument and separated from the bone and left behind as a jagged

curtain, thus occluding the opening. His new instrument by reason of its reverse action cuts the mucous membrane cleanly.

Lemere (8) has recently described a new operative technic in the case of maxillary sinusitis. It is essentially a modification of the Caldwell-Luc operation. An incision about one inch long is made at the junction of the gingival and buccal mucous membrane above the roots of the bicuspid. The periosteum is elevated over the anterior wall and a circular opening is made in the antrum about three-quarters of an inch in diameter. A round mastoid spoon curette is used to make the initial opening through the nasal wall. The large size Ostrom forceps is then employed for cutting away the nasal wall, under the inferior turbinate. When the opening into the nose is deemed sufficient, a rubber tube perforated in its upper portion, is introduced into the antrum, pushed in as far as possible and the lower end allowed to project three-quarters of an inch into the mouth. The incision is closed by cat-gut suture central to the tube and the ends of the sutures are tied several times around the tube to secure it in position. The tube is then cut short enough to be concealed by the lip. Irrigations are commenced six hours after operation, carried on through the tube and used about every three hours. The tube is removed at the end of twenty-four hours and irrigations are made directly through the oral opening.

M. Jarcod (9) has described a modification in the technic of total laryngectomy for cancer. This consists in performing the operation in two stages; first, opening the trachea and secondly, laryngectomy after two or three weeks. The incision is vertical and median from the inferior border of the thyroid to the border of the second tracheal ring. The cricoid is thus exposed. The laryngotracheal incision is horizontal following the inferior border of the cricoid. The cutaneous lips are drawn symmetrically to the right and left in the two lateral angles in the tracheal incision and are sutured with the intertracheoesophageal partition. The sutures are removed in five or six days. The removal of the larynx is effected in the classic manner and preferably from above downward.

In the field of therapeutics, roentgen-ray has been used in the treatment of chronically infected tonsils and adenoids, with variable results. Waters (10) reports that roentgen-rays therapy causes a decrease in the size of chronically infected tonsils and adenoids, especially in the large cellular type. It will not cause the hemolytic streptococcus to disappear permanently from the surface of the crypts. There is relief from the symptoms but it is only temporary. X-ray may possibly prove to be useful, especially in the treatment of hypertrophied tonsils and adenoids in children, but our personal experience does not justify us to recommend such treatment in preference to tonsillectomy, except in especially selected cases.

Strandberg (11) has had success with the use of the Finsen baths in the treatment of tuberculosis of the larynx. This bath is a universal irradiation of the whole body with unconcentrated electric light. The author uses a room four meters high, having a stone floor with drain in the center. The room is painted blue to avoid blinding reflexes. Two large arc lamps 1.25 meters above the floor, burning without globes, are used, with 75 amperes current, and a tension of 50-53 volts must be produced from available current by transformer and resistance. The time of radiation is gradually increased from 15 minutes to two and a half hours. Portman (12) has found that radio therapy of the spleen also

will have favorable effect on tubercular laryngitis. He explains this by increased leucocytolytic function of the spleen. Among other therapeutic measures which have recently proved useful are chaulmoogra oil, cautery and helio-therapy.

Butyn is claimed to have the following advantages over cocain as a local anesthetic; no case of poisoning has yet been reported, it is more powerful than cocain, acts more rapidly, is less toxic, is slightly antiseptic, causes no shrinking of tissues, has no drying effect, is not habit-forming and can be boiled. To control cocain poisoning, the best results can be obtained by the intravenous injection of sodium diethyl barbiturate; chloral hydrate and scopolamin hydrobromide are also useful.

No epochal discovery has marked the year in the field of otology, but steady progress in every branch has been the rule.

Starting with the external auditory canal, we note a rather ingenious method put forward by De Kerangel (13) of removing recently introduced foreign bodies; after placing a couple of gauze wicks in the canal, he pours in warm melted ambrine or other similar waxy material which solidifies on cooling, when the whole cast, including the foreign body, may be easily withdrawn. For atresia of the canal in suitable cases Rigaud (14) has utilized the Escat operation, which may be performed as well under local as under general anaesthesia. The essential feature of the procedure is a resection of a portion of the posterior bony wall of the canal and anterior surface of the mastoid process, and the placing of a cutaneous flap to provide for epidermitization.

Among the remedies calling for special mention for the treatment of chronic suppurations of the middle ear and unhealed mastoid cavities, are pyoktanin in 20% alcoholic solution as used by Demetriades (15), ionization with a glycerinated aqueous solution of zinc sulphate as recommended by various writers, and neutral acriflavine in 1:1000 solution used as drops or as an irrigation. The latter seems in our hands to be particularly effective. An increase in the amount of discharge is noted for a few days, but this is followed by a steady and prompt decrease leading to complete healing, this agent having been proven to be practically as powerful a germicide in the presence of body fluids and discharges as in vitro. Meijjes (16) reports good results in acute ear infections as well as in catarrh of the Eustachian tube from the use of hot air blown into the ear canal from a specially constructed apparatus, while Gerstenberger and Dodge (17) warmly praise Oeken's method of using the heat rays of a small, 600 candle-power, white, glass, Sollux lamp in chronic suppurative otitis media, the technic being given as follows: (1) Cleansing of the external canal. (2) Exposure of the ear to the light for 1 hour at a distance of 10 cm., the eyes being carefully protected. (3) Cleansing of the external auditory canal with hydrogen peroxide at home three times daily. (4) Return for exposure to light once daily.

In the treatment of deafness and tinnitus, the Rice Oto-Concussor appears to be of value in some cases. We have utilized it extensively, but wanting the faith to use it exclusively on any considerable number of patients, we are not able to say how much credit is due to the oto-concussor and how much to the other forms of treatment. However, we feel that its continued use is warranted, and especially so in the case of patients who require mental as well as physical dilatation, as anyone who comes in contact with any considerable number of deaf patients knows that one of the most distressing features of this affliction is its tendency to cause the individual

to narrow down his activities, to withdraw more and more into his shell, as it were, causing him to require stimulation from without if he would keep his head up. In obstructive lesions of the Eustachian tube that do not yield to the usual treatment, Barker (18) recommends galvanism, the negative pole being placed in the tube in case of fibrous stricture, the positive pole being used where the obstruction is due to hypertrophied mucous membrane or to organized exudates. He also speaks highly of electro-thermic coagulation for the removal of benign growths of the external ear, and for the prevention of recurrence of malignant ones.

The resemblance of otosclerosis to rickets has led Kauffman (19) to make use of cod liver oil, with apparent benefit, especially in the relief of tinnitus.

Aside from the active treatment of deafness, the study of its prophylaxis has received new impetus from much painstaking work in many quarters. Bock (20) has given many useful suggestions in the matter of personal hygiene for those already affected as well as for those who would avoid catarrhal troubles in the nose, throat and ear. In analyzing any large group of cases of deafness, one cannot but be struck by the part played by the diseases of childhood in laying a foundation for the development of middle ear and tubal mechanical deafness in later life. Pierce and Theobald (21), in the report of a survey of conditions in a Chicago public school, have demonstrated that there are 23,000 odd school children in that city with tubotympanic catarrh, and that 6,000 of these will go to swell the ranks of the deaf before they reach the age of 35, if not properly treated. Similar work that we have been doing on a smaller scale in New York fully bears out the conclusions they have drawn, and while these percentages will undoubtedly vary as more cities are covered, yet here is brought home to us a fairly definite picture of the widespread occurrence of a preventable disease, a picture which the family physician should study with care, as he is the first and often the only one to come in contact with these children before the damage is irreparably wrought. This subject is not being harped upon too much, for after all, what are ears for, if not to hear with?

With reference to the prognosis in cases diagnosed as nerve deafness, attention has again been called to real improvement in hearing following treatment directed to the eustachian tube and middle ear, showing that even though the nerve is involved the frequently accompanying conductive obstruction should not be disregarded. In this connection, Lederer (22) states that he has obtained excellent results in otosclerosis, nervous conditions and combined nervous and middle ear affections from the use of panitritin. He states that in nearly three-fourths of all cases of defective hearing and tinnitus aurium the auditory function was improved, and in more than four-fifths of these cases the subjective sounds were either permanently or temporarily relieved, or at least considerably decreased. Panitritin is nitrite of papaverin dissolved in acetdiacetylamid, and is a direct antagonist of adrenalin. The drug is injected into or under the periosteum of the mastoid plane of the diseased ear, following anesthetization of the site of injection with 3 or 4 applications of a 1% novocain solution without adrenalin, the dose being the contents of one ampoule, or 1 c.c., which contains 0.05 gm. of panitritin. The treatment should not be repeated for at least 4 weeks, the greatest number of injections being six.

The stereoscopic radiograph has taken its place as a valuable aid to the mastoid operator, especially in showing the anatomy of the mastoid process, the location and shape of the sinus, and the presence of normally or

atypically placed cells. In cases presenting few or unusual symptoms and signs, such as those preceded by only slight evidence of otitis media, and in cases of otalgia simulating mastoiditis, the radiograph is of the greatest assistance. One of us (23) has recently reported three unusual cases of mastoiditis in which there had never been any discharge from the ear, and in which the x-ray clinched the diagnosis. It is equally of value in ruling out mastoiditis in cases of otalgia, which, as has been recently shown, is not frequently a symptom of a nasopharyngeal tumor.

The subject of facial paralysis has been ably covered in an article by Ney (24), who concludes that the lesion is usually located in the facial canal of the temporal bone, and is compressive in nature, and that in 70% of the cases the etiology is still obscure. For re-establishing the functional continuity of the nerve, which he finds to be the only hope of correcting peripheral facial paralysis, he effects repair after uncovering the nerve in its course through the temporal bone.

In these days when the color of milady's hair must follow the style, attention must be given to the warning of Laurens (25), who has found that certain hair dyes contain a powerful labyrinthine poison. Moved by the work of Goldschmitt, who referred to the role played by the anilin dyes in the etiology of otosclerosis as observed in workers in dye-factories, he investigated the subject further, and now states that acute and chronic intoxications of the labyrinth can be traced to the use of hair dyes which have as a base paraphenylenediamin, called by the hairdressers "para". When certain oxidizing substances are added to the "para" to get the color effect desired, there is often formed an accidental derivative called quinonediamin, a violent poison to the red blood cells, which is absorbed through the dampened skin and hair, and can soon be demonstrated in the saliva.

In a review of suppurative meningitis not due to the meningococcus, Eagleton (26) concludes that in true cases, i.e., those with micro-organisms free in the cerebro-spinal fluid system, the prognosis is almost uniformly hopeless. He recommends lavage or irrigation of the subarachnoid spaces with a modified Ringer's solution, introducing the irrigating needle into the subarachnoid space, with the insertion of a second needle of larger bore into the cerebello-medullary cisterna, following the occipito-atlantal puncture technic of Ayer, to recover the outflow. This is given as a rational procedure, not only for keeping open the tracts for the normal circulation of the cerebro-spinal fluid essential to the removal of waste products and to the nutrition of the cerebral tissues, but also for partially at least removing the bacteria and exudates produced by the toxic reactions of the tissues themselves. He asserts that it is a painless procedure, and without great danger if conducted with scrupulous care as to technic, the speed of flow being carefully regulated, and the fluid employed maintained constantly at a temperature of 99° throughout the operation.

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A Review of the Progress of Obstetrics and Gynecology for the Year 1922

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In reviewing the work done in Obstetrics and Gynecology during the year 1922, one is struck with the lack of scientific research. As usual, however, much has been written that is of great practical value, particularly to those who really "hanker" to be honest clinicians, and who put the welfare of their patients first "every day in the week and Sunday, too."

Notwithstanding the fact that there appears nothing left to "discover," there may be a few problems that an earnest research worker might discover in the world of Obstetrics and Gynecology, for Dr. G. G. Ward in his Presidential address before the last meeting of the Amer. Gyn. Soc., May, 1922, called attention to the fact that the causes of *sterility*, *eclampsia*, the cause of the onset of labor pains, etc., were problems not yet satisfactorily explained and added that America might take the lead in solving some of these perplexing problems. And, why not? We are taking the lead in many other ways nowadays and there is no valid reason why we cannot excel in scientific research.

By far the most valuable contribution of the year, both from a scientific as well as clinical standpoint, is that of Sampson's on "The Life History of Ovarian Hematomas (Hemorrhagic cysts) of Endometrial (Müllerian) Type" (*Amer. Jour. Obst. & Gyn.*, vol. 4, No. 5, 1922). Nowhere to be found is there a discussion of this subject from the angle that Sampson has attacked it. His observations are original and bid fair to add a new chapter in our understanding of certain pelvic lesions which have hitherto been either overlooked entirely or misinterpreted. In his conclusions the author states that "next to leiomyoma of the uterus, the pathologic conditions arising from the implantations of epithelium which escapes through or from the fallopian tubes into the peritoneal cavity probably furnish the most frequent pelvic lesions found in women between the ages of 30 and the menopause." He found 37 cases of ovarian hematomas of endometrial type in the course of 170 abdominal operations done during the year ending May, 1922. The epithelium which primarily gives rise to these implantation growths comes from the uterus or from the fallopian tubes and their fimbriae. It may lodge and grow upon any or all of the pelvic structures, the surface of the ovaries being a frequent site. Once grafted upon the surface of any of these structures they develop into glands or tubules (adenomas) of endometrial type. "The primary peritoneal implantation adenomas are usually small and insignificant, but may spread and become invasive. The implantations on the ovary invade the tissues of that organ as a result of their reaction to menstruation, develop hematomas (hemorrhagic or menstruating cysts) of endometrial (Müllerian) type." Furthermore "in its reaction to menstruation, portions of the epithelial lining of hematomas within the ovaries are cast off into the cavity of the hematoma, and may be found lying in its hemorrhagic contents." When such hemorrhagic cysts, so called chocolate cysts, rupture by perforation or otherwise allowing their contents to empty into the pelvic cavity, implantations may take root and grow wherever they happen to land. Thus "the ovary becomes the incubator or intermediary host in the development of pelvic implantation adenomas of endometrial type, which in some instances may possibly impart great virulence to the

epithelium developing in it; but it is not an essential intermediary host in the origin of all implantation adenomas of endometrial type." But why all this discussion about such growths? Of what clinical importance are they anyhow? These questions may best be answered by the author's own closing words: "the implantation adenomas in the ovary derived from tubal or uterine epithelium are the source of many ovarian cysts and carcinomas"; and I should add, whose origin have not hitherto been satisfactorily explained.

Tuberculosis of any organ is a serious malady an active tuberculous peritonitis is a very distressing disease. Reuben Patterson in "Review of 100 cases of Women with Pelvic Tuberculosis with Special Reference to the End Results of Operative Treatment" was able to formulate the following conclusions:

1. Since pelvic tuberculosis in women is usually a secondary infection, it is of the first importance to find and estimate the extent of the primary focus before deciding for our against operation for the pelvic lesion.

2. Operation should be postponed or avoided altogether when the pulmonary tuberculous lesion is extensive.

3. Otherwise the percentage of primary and secondary deaths will be high, since the operative procedures may augment the pulmonary lesions, as shown in the series of 100 cases analyzed where over 50 per cent of the patients who died had demonstrable pulmonary tuberculous lesions.

4. The end result of the operative treatment of pelvic tuberculosis are on the whole favorable, since about 75 per cent of the patients should be alive and in good health after a considerable period of years.

5. Whenever the condition of the patient warrants, radical removal of the pelvic organs is indicated, since more than one portion of the genital tract is usually involved in the tuberculous process and because the best end results follow such radical removal.

6. Unless too extensive, tuberculosis of the peritoneum will be cured if the other pelvic tuberculous lesions be removed.

Heretofore comparatively little has been written concerning roentgenography in obstetrics, but, judging from the work done in this field during the past year, we may expect this form of roentgenography to assume a position of great importance in the field of obstetrics.

As early as 1897, Budin and Varner published the results of their work upon the shape and size of the female bony pelvis by means of the x-ray. (Horner, D. A., *S. G. & O.*, vol. 35, No. 67; July, 1922.) Since this work there have been many investigators and much work done upon this subject, and yet, a simplified, satisfactory working method has not been devised. Thoms (*Amer. Jour. Obs. & Gyn.*; 4; Sept., 1922, p. 257) gives a method that was used at Grace Hospital, New Haven, Conn., with very gratifying results, both as to ease of execution and accuracy. However, even this method is too complicated for the average obstetrician or Roentgenologist to institute as a routine procedure in his daily work. Spaulding of San Francisco (*S. G. & O.*, 35; No. 6; Dec., 1922) gives, in detail, the roentgenographic pelvic measurements of 14 patients by the stereoscopic method of Cham-

berlain and Newell. This apparently is quite a satisfactory method but here again the clinician is confronted with too complex a problem for everyday use.

Stereoscopic views at or just before term give a much clearer picture of the relation of the head to the maternal pelvis, than roentgenographic measurements at an earlier date could possibly give. So far obstetricians have no very accurate method of determining the size of a given fetus, roentgenographic observations are a great help in solving this problem and bid fair, in the near future, to furnish data by which the exact size of the fetus can be foretold. Having in the meantime, accurately obtained the pelvic measurements, the prognosis, in any given case, becomes a much simpler matter than it is today, even with the most expert obstetricians.

It cannot be gainsaid, even in the face of the facts now at hand, that the judicious use of the x-ray, in obstetrics is one of the most valuable means of conserving maternal and fetal life that we possess today.

Toxemias of Pregnancy

The exact nature of many of the toxemias of pregnancy have for many years baffled many earnest workers and we therefore welcome any research investigation that will throw any light whatsoever upon the causation of these very annoying morbid states Spaulding of San Francisco (*Amer. Jour. Obs. & Gyn.*; 4; Oct., 1922, p. 350), in his article upon "The Extent of the Renal Lesion in the Toxemias of Pregnancy," puts forth a very valuable method by which "the amount of actively functioning renal tissue in the living kidney" can be determined. As a result of this study, Spaulding provisionally, takes the view that the "renal lesion in pregnancy toxemia is important not before, but after, delivery. Continuing he says, "The danger lies not in the extent of the lesion during the acute toxemia, but in the fact that it may fail to heal, and may become a continuing and self-perpetuating disease which either alone or with the help of a complicating arterial disease may ultimately lead to the death of the patient in uremia. We take this view only provisionally, because the number of our observations is small, and the whole question is an extraordinarily complicated and difficult one. It will require serial observations over a period of years on many post-toxic cases; much work on the effect on the kidney of normal pregnancy, both before and after delivery; and observations of the influence of pregnancy on patients with pre-existent renal lesions, before any certainty can be attained." On the other hand Killian (*Proc. N. Y. Path. Soc.*, 21:29, Jan.-May, 1921), has attacked the problem from a different angle. In his article on the "Significance of Chemical Changes in the Blood in the Toxemias of Pregnancy" the author found that all such toxic cases could be put into 3 distinct groups: (1) the nephretic toxemias; (2) the hepatic toxemias or true eclampsias; (3) the mixed toxemias, according to the chemical blood findings in each particular case. Furthermore, he states that with the removal of the fetus from the uterus marked immediate improvement results in groups 2 and 3, while in group 1 removal of the fetus is followed by only a slight general improvement and without return of normal blood findings. Whether or not the blood chemistry will ever return to normal depends wholly upon the extent of the renal lesion.

The conservative treatment of Eclampsia as outlined by Davis (*Ther. Gaz.*; 46; June, 1922; 385), or by Jane Ketcham (*J. Ind. State M. A.*; 15; June, 1922; p. 187) is, except, in certain special instances, the treatment that gives the best results. In the vast majority of cases nothing is to be gained and much harm may be done, by operative interference. In either instance—conservative or operative management—the mortality of Eclampsia is still

around 25 per cent for the mother and 65 per cent for the baby, a fact that is appalling to the conscientious obstetrician.

Cancer

No review could be complete that did not mention cancer. Yet what can be said that is new about cancer? There is no subject in medicine today that needs any more conscientious study and scientific research than the subject of cervical, uterine and breast cancer. So far, after nearly 100 years of study, i. e., since the discovery of the achromatic microscope in Paris in 1824—we know very little regarding the cause of cancer and still less about its cure.

The management of cervical and uterine cancer must still remain a most important detail in the life of every physician when out of 31,000 cases of cancer, according to Friedlander (*Inter. J. Surg.*; 35; Feb., 1922), 29.5 per cent were of the uterus and cervix. Early diagnosis is the keynote. In early cancer of the uterine body, a complete hysterectomy will cure from 60 per cent to 90 per cent of the cases. Where there is extension into the parametria, radium gives the best results. Massive x-ray treatment of the parametria through the abdominal and back should later be given (Frank, *Colo. Med.*, 19; Apr., 1922; 83). In the borderline inoperable cases radiation followed by wide hysterectomy gives the best results. In the Gynecological Clinic of Kiel, Giesecke (*Arch. f. Gynak.*, 115; 435; Feb. 16, 1922), reports 371 carcinomas of the uterus, that were observed for 5 years, and up to the present time only 103, or 27.7 per cent, are permanently cured.

The surgeons deserve great credit for their work upon cancer of the breast. Most all that we know about this subject has evolved from the surgeon and the pathologist, yet the mortality from breast cancer, treated by surgery alone, remains somewhere near 80 per cent, a truly appalling state of affairs (Pfahler, *S. G. & O.*; 25; Aug., 1922; p. 217). Any form of treatment, therefore, that can be combined with surgery or used alone that will reduce this mortality rate should by all means, be used. X-ray and radium, before or after operation, or both, has reduced the surgical mortality about one-half, i. e., from 79 per cent to around 35 per cent—Sistrunk (*Jour.-Lancet*, 42; Feb. 15, 1922; 75) gives his results in 218 cases of breast cancer. In this series only 85, or 39 per cent were alive at the end of the 5-year period. Gage and Adams (*Ann. Surg.*; 76; Sept., 1922; 346) in 101 consecutive operations for breast cancer only 17 per cent were alive from 3 to 16 years after operation. Sixty-eight per cent died from cancer either of the breast or elsewhere—while 11 per cent did from other causes.

Radium in Non-malignant Uterine Bleeding

As experience with the use of radium has increased, its indications and limitations are gradually becoming better understood. It is now certain that in practically 100 per cent of the cases of uterine bleeding of non-malignant origin, where there is no complicating pelvic pathology, that the bleeding can be controlled by the judicious use of radium. (Clark & Keene, *J. A. M. A.*; 79; Aug. 12, 1922; 546; Frank *W. Va. Med. Jour.*; 16; May, 1922; 432; Matthews, H. B., *N. Y. State Jour. Med.*; 22 Dec., 1922). It constitutes, in fact, the treatment of election in a large proportion of these cases, and while radium should not entirely supplant surgery in the management of non-malignant uterine bleeding, I do not hesitate to state that hysterectomy or other more or less mutilating operations is absolutely contra-indicated in the uncomplicated straight-forward cases of intractable uterine bleeding due to small fibroids, myomas, fibrosis uteri, chronic metritis and the so-called myopathic, idiopathic or essen-

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Progress in Social Hygiene and in the Dispensary Field

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The year 1922 has seen no startling change in the general program of social hygiene. It is rather difficult to measure progress. Today because of the marked emphasis being placed upon sex education and other general welfare movements seen as the important features of venereal disease control, one misses the needed emphasis upon the diseases—gonorrhea and syphilis, their diagnosis, treatment and epidemiology.

It is generally assumed, and such figures as are available tend to confirm this assumption, that the gross amount of treatment given and the number of individuals under treatment has increased; although it is claimed that this is a result of a campaign of eradication rather than an increase in disease incidents. It is regrettable that physicians have not co-operated in the reporting of venereal diseases. Four-fifths of the cases reported are in public institutions but the total number of diseases reported has slightly decreased. The United States Inter-departmental Social Hygiene Board, which for the last three years co-operated in carrying out experiments and research—notably by Young, Davis, Warthin, Solomon, Engman, Reid Hunt, Jeans, and others, has been deprived of all federal money. Charitable organizations are studying their own problem as it relates to venereal disease in their families asking for relief; communities continue to study their general situation; medical societies are recognizing the importance of venereal disease control work and the strategic position of the clinic in the scheme. One county medical society has gone on record as opposed to clinics without social service and has declared that acute stages of venereal disease are to be accepted by clinics without question as to ability to pay.

Prophylaxis is receiving but little discussion and is not in evidence through large sales of prophylactic material by drug stores. The Public Health Institute in Chicago is attracting the attention of hospital and health workers, and should interest physicians because it parallels under private auspices the pay clinic for venereal disease of the regular dispensary, plus full-page newspaper advertising and strong business backing.

The international importance of social hygiene is shown by the activities of many countries against venereal disease, as expressed in clinics, campaigns of public information, and legislation to abolish the regulation of prostitution. There has been an attempt to provide treatment facilities in all seaports throughout the world, and the United States is practically the only one of the major countries which is not co-operating in providing for foreign seamen coming to its ports, although our seamen may receive free treatment elsewhere.

In New York City the physicians working in the venereal disease clinics through their association aided in the preparation of the pamphlets on gonorrhea and syphilis recently issued by the Health Department. In another city the physicians, health officers and workers in clinics attempted to solve the problem of determination of cure; in another, the dispensary problem in its relation to health, and again the problem of dispensary abuse. Thus it may be said that if there is an outstanding constructive note of progress in 1922 it is a closer co-operation of the medical men with the health authorities.

The Committee on Out-Patient Work of the American Hospital Association has been observing the dispensary field for about ten years and in its annual

report to the American Hospital Association of the current year gives a statement of growth as follows:

Year	Number of Dispensaries and Out-Patient Departments
1904	200
1910	700
1916	2300
1922	4000

These figures are all-inclusive, grouping under the title of dispensaries the various types of public health clinics such as tuberculosis, venereal disease, mental hygiene and child welfare.

In general it may be said that the growth of general dispensaries in 1922 and for three or four years previous has not been very extensive, whereas the special dispensary, the public health clinic, has grown by leaps and bounds. In 1904 the figures show 20 dispensaries for tuberculosis; in 1922 they were 667; while of infant and child hygiene clinics there were none in 1904 and 566 in 1922.

We find that less than one-fifth of the general hospitals have out-patient departments. The growth of general dispensaries has been gradual, while the growth of public health clinics has been a phenomenal one. It is unfortunate that the development of out-patient service is outside of the hospital world. The result has been some duplication of effort and a decided evidence of lack on the part of the non-hospital clinic of those finer diagnostic aids, both mechanical and personal, which insure the complete appraisal of the general mental and physical health of a human being rather than a "case".

Within the next few years the hospital and the health officer will arrive at a closer understanding of their medical and social relation to the community in the prevention and amelioration of its diseased conditions. Within the hospital field we find a tendency towards "specialization" which, paradoxically, is a sane return to the less specialized physician. The special clinic for syphilis, metabolism, diabetes, is in the last analysis an attempt to bring to the patient in the clinic that something which he should get from his family physician—the complete evaluation of the patient and his environment. On the other hand, these special clinics by virtue of their visualizing the whole patient, rather than some isolated anatomically restricted area of a "case", have enabled the physician to do better clinical work under more interesting circumstances, and the results of this production by the medical profession are being seen and will be seen in the better medicine of the future. More teaching of medical students, nurses and social workers has been conducted during this year than in the past. Internes are being used in dispensaries in a greater degree than ever before.

With all the progress that has been made in the past ten years, particularly the recognition of the dispensary during the year 1922, it is still an insignificant part of the hospital insofar as its support is concerned. While it may be made the door of the hospital for the feeding of the wards, and the place for competent after care; while it may forestall some of the serious diseases by early diagnosis and shorten-

ing convalescence, thus economically contributing to the welfare of the community as a whole, and most materially aid the hospital in rendering the community the service which they all claim to render; while the dispensary is capable of all these things and does many of them under its present handicap, it is almost entirely ignored by the contributors and controllers of the purse strings of the hospital.

The standards for out-patient service can be raised. It remains for the medical profession to express itself and insist on a standardization which will do for the dispensary what has been done for the improvement of the hospital service.

The out-standing feature of the year 1922 is probably the study of dispensaries and the report thereon of the American Medical Association,* while the out-standing note that one can hear is a desire for any improvement that will render better and more understanding service. This report gives estimates of 8 million people making 29½ million visits to dispensaries of all types during the year and the most complete figures extant upon all phases of the dispensary problem, and closes by observing that:—

1. There is a steady increase in the number of patients seeking treatment in general dispensaries.
2. There has been an unprecedented increase since the war in the number of special clinics and dispensaries, such as those for tuberculosis, venereal disease, mental hygiene and child hygiene.
3. There is a great need for individualized study and treatment of dispensary patients, to counteract what seems to be a prevailing tendency to routinization.
4. There is need of a closer bond between the out-patient service and the other service of hospitals, and this will be best met by having the hospital and the out-patient staffs identical and by having unified records.
5. In the matter of finances there is an increasing tendency to charge nominal fees, thereby placing part of the cost of an institution on the patient.
6. A general increase is noted in the use of social service workers to see that patients continue their treatment, and to investigate their social and financial status so as to prevent pauperizing.
7. The difficulty of securing satisfactory data is increased by the inadequacy of clinical and office record systems in a large number of institutions.
8. There is a great and increasing amount of educational work, especially the teaching of interns, medical students, graduates and pupil nurses.

The progress of 1922 will be carried into 1923, and the next year should see a closer relationship between the medical profession and the dispensary in every way.

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Progress in the Treatment of Syphilis

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Syphilis continues to occupy a leading position in medicine. The saying that the medical practitioner is most successful who most successfully treats lues was never truer than today. The treatment of this condition, after twelve years of experimentation with the arsenicals, is in a measure becoming standardized in that syphilologists are realizing the necessity of utilizing both arsenic and mercury and, in the later stages, the iodides in combating the disease. Very few physicians attempt to treat the condition only with arsenic and very few are archaic enough to believe that lues can be overcome with mercury alone.

Physicians are beginning to realize that successful anti-syphilitic treatment means very intensive treatment. This includes in acute cases the administration of the arsenical as often as every 72 hours with courses which include not less than twenty-five doses of the arsenical during the first year, and long-continued and simultaneous dosages of mercury.

While no particularly outstanding work has been accomplished this year, experiments which have been continued along the lines of treatment with bismuth, neosilver-salvarsan and sulpharsphenamine, may be regarded as important.

In preparing a review of the literature it has been the idea of the collator to present this subject not for the specialist, but rather for the general practitioner. We have attempted to direct his attention to the leading points in all that is new as well as the latest opinions on the questions which have been under discussion for years past.

Bismuth

Bismuth, as an adjuvant in the treatment of syphilis, has been studied very largely by Sazerac and Levaditi, who were the first to use it, Fournier, Guenot, Jaquet, A. Marie, Thiberge, Milian, Revaut, Charneille and Emery. After trying a variety of salts, the tartrobismuthate was adopted as being less toxic and having more therapeutic power. An oily suspension also gave better results than an aqueous solution, as it was less irritating. The intramuscular method is employed over the intravenous on account of the greater toxicity of the latter.

In a complete review of this subject by C. N. Myers and H. B. Corbitt, New York, which will appear in *Am. J. Syph.*, Jan., 1923, dealing especially with the toxicity and trypanocidal activity of tartrobismuthate, it is observed that Sazerac and Levaditi in 1921 concluded that the "tartrobismuthate of potassium and sodium has a decided curative effect on experimental syphilis of rabbits. The results obtained in the treatment of trypanosomiasis and nagana, though undeniable, are nevertheless inferior to those observed in syphilis."

These observers carried out in 1922 a series of studies on five human subjects with apparent satisfaction, serologically and clinically, except that stomatitis, salivation and gingival margin were observed and they concluded that "bismuth is a spirillicide of remarkable activity and its action, as much with men as with animals, is comparable to that of the best anti-syphilitic medicaments. It seems to work better than mercury and more effectively, although in certain cases less rapidly than the most active arsenicals."

Marie & Fourcave (*Ann. l'inst. Pasteur*. Vol. 36, page 34, 1922,) treated 20 cases of neurosyphilis with the drug. No particular results were observed.

Fournier & Guenot (*Ann. l'inst. Pasteur*. Vol. 36, page 14, 1922,) treated 200 cases with the bismuth salt and noted a rapid disappearance of spirochetes, and negative Wassermann in primary and secondary cases. Tertiary cases did not respond serologically. They regard bismuth as an extremely powerful anti-syphilitic, but caution against the possibility of stomatitis.

Milian and Perin (*Bul. soc. franc. d. dermat. et syph.* Vol. 29, page 7, 1922,) reported to the society on the treatment of 50 cases in which they observed stomatitis with great frequency.

Carle (*Bull. soc. franc. d. dermat. et syph.* Vol. 29, page 113, 1922,) found the great obstacle in bismuth to be the local pain which radiated in different directions. He did not have a good impression of the drug.

Jeanselme, Pomaret, et al. (*Bull. soc. franc. d. dermat. et syph.* Vol. 29, page 13, 1922,) found that results with bismuth are slower than with arsenic and they observed stomatitis in 40 percent of their cases. This condition was also noted by Hudelo et al., reporting to the same society.

Various writers observe that the toxicity of bismuth given intravenously is much higher than when administered intramuscularly and that the variation is considerable with various species of animals.

Myers and Corbitt conclude that the minimum effective dose on trypanosomiasis, using the trypanosome equiperdum as the experimental organism, is considerably higher than the minimum lethal dose. In each, 60 percent of the animals must survive at a given dose. Comparing the foreign products with American products they find that the toxicity is about 36-40 mgm. per kilo. The reports on the intramuscular toxicity are not given in this paper.

Bloch (*Klin. Woch.*, page 1883, 1922,) states that "we have as yet no reason to suppose that bismuth therapy may replace salvarsan therapy for, though it acts effectively clinically and bacteriologically, still it does not reach the efficiency of salvarsan in serological effect. On the other hand, it appears that bismuth is decidedly superior to mercury in activity and tolerability and that, consequently, it is quite possible in the future it may replace mercury partially or entirely in the case of mixed treatment."

Several salts of bismuth have been employed but the tartrobismuthate of sodium and potassium seems to be the least toxic and the most accurate. It is a white insoluble powder. A description of the drug and the method of administration with certain comments is to be found in *MEDICAL TIMES*, page 271, Oct., 1922.

Neosilver-Salvarsan

Neosilver-salvarsan is a new product developed in Hoechst. The drug is sold in Germany in 0.2, 0.3, 0.45 and 0.6 gram ampules. Neosilver-salvarsan is now in process of manufacture in the H. A. Metz Laboratories, New York, and will in due course be in the hands of the American medical profession.

Dub, of Prague (*Munich. med. Woch.*, page 1293, 1921), used it in the first one hundred cases to the exclusion of local treatment, watching the Wassermann carefully. He injects the drug in 20 cc. of distilled water intravenously, although in some cases he utilized the product intramuscularly, mixing 1 cc. of a 2 percent. novocain solution with 1 cc. aqueous sterile sugar solution in which mixture had been dissolved 0.2 neosilver-salvarsan. This caused a painless intramuscular

injection and the period of afterpain was much decreased. Dub reached the conclusion that neosilver-salvarsan given in the same dosage as neosalvarsan had a better effect, without reaching the effect of an equal dose of old salvarsan. The absence of any angioneurotic symptoms is a real advantage. There is the added advantage of the use of the intramuscular treatment and the fact that it is not so hard on the kidneys. He believes that mercury should be utilized in conjunction with neosilver-salvarsan.

Weber and Hillenberg (*Deutsch. med. Woch.*, Sept. 3, 1921,) employed four hundred injections of silver-salvarsan in 56 positive cases of secondary syphilis and four hundred injections of neosilver-salvarsan in 45 similar cases. The silver-salvarsan cases became negative after an average of 3 grams, while the neosilver-salvarsan cases became negative in general after from 1.1 to 2.4 grams. This difference was especially marked in cases in which treatment was combined with mercury. There were no exanthematous reactions and headaches and other similar symptoms were seldom observed.

Krebs (*Deutsch. med. Woch.*, page 158, 1922), thinks that with neosilver-salvarsan we have come nearer to our goal, that is, to produce a readily soluble arsenical preparation, combining low toxicity and good tolerability with a high bactericidal effect. In two hundred cases, in all stages of syphilis, together with the use of mercury he obtained results which surpassed all former preparations and which have not been equalled by any combination of mercury and salvarsan.

Sternthal (*Deutsch. med. Woch.*, 457, 1922,) thinks neosilver-salvarsan is an excellent agent. He says that it is still to be ascertained whether or not the "mixed injections" can be surpassed. He advises the use of neosilver-salvarsan and one of the mercurials under ordinary circumstances.

Hannes Weber (*Derm. Woch.*, 1922), observes that though it is necessary to exercise great care in the use of neosilver-salvarsan it is a product which is well tolerated and its prompt and intense effectiveness on the highly infectious manifestations of the skin and the mucous membranes of syphilis make it a valuable weapon in the battle against this disease. Gratifying results were obtained in the treatment of metaluetic affections.

A. Ziegler (*Deut. med. Woch.*, No. 29, 1922), says that neosilver-salvarsan had good therapeutic effect. Striking differences could not be determined when compared with the older salvarsans. Such would naturally be difficult to find with the small and incomplete observations made (250 patients, 1988 injections). Secondary reactions corresponded with those of other salvarsan preparations.

None were serious. His results indicate that the preparation deserves further investigation.

A. Steuhmer (*Deut. med. Woch.*, No. 18., 1922), says his observations show neosilver-salvarsan to be a distinct progress in salvarsan therapy. In the case of silver-salvarsan his experience taught him that a more intense bacteriocidal effect is always obtained at the expense of a considerable increase of undesirable secondary reactions. Neosilver-salvarsan does not seem to have this disadvantage. So far it has never been accompanied by complicating reactions. He is not in a position to make any definite statement on the permanent results obtained with neosilver-salvarsan, but his experience led him to expect that in this respect the medium will not prove inferior to the other arsenicals.

C. Bruhns and G. Bluemener (*Klin. Woch.*, No. 26, 1922), comparing the new salvarsan methods with neosalvarsan-Hg-salicylate injections says no preparation seemed to possess any striking superiority as regards

the immediate effect of clinical symptoms and on the Wa-R (Wa-R turns negative in 79.8 to 88 percent. in early lues according to the various methods.)

Regarding permanency of the cure and secondary reactions, the duration of the results obtained was unsatisfactory following treatment with neosalvarsan and Hg-salicyl.; the doses given were evidently insufficient (2.25 to 3.0 gm. neosalvarsan and 1.0 gm. Hg-sal.) as was also the case with doses of 2-3 gm. silver-salvarsan without the addition of Hg. Cases of dermatitis were observed as secondary reactions following the latter method. Satisfactory permanent results were obtained with neosilver-salvarsan plus novasurol, and with neosalvarsan plus novasurol (cases with a combination with cyarsal have not yet been under observation for a sufficient period.) In cases with neosalvarsan plus novasurol and neosalvarsan with cyarsal jaundice was frequently encountered as a secondary reaction.

So far as they can judge the best total result was obtained with neosilver-salvarsan with novasurol. Further investigations will have to reveal if the large number of jaundice cases were only a coincidence.

E. Liebner and T. Rado (*Med. Klin.* No. 31, 1922), believes that neosilver-salvarsan may be regarded as a very efficient medium in the treatment of syphilis. Its prompt and permanent effect will place it above the other salvarsan preparations in many cases. In their opinion it is the method of choice for the treatment of all stages of syphilis. Care must only be taken to avoid angioneurosis and this will be possible if the correct technic is observed. Occasionally skin irritations will force the physician to discontinue the course of neosilver-salvarsan treatment for a time; it is of importance to note, however, that as soon as they have subsided treatment may be continued with another salvarsan preparation. No differences were observed in the results obtained with combined Hg-neosilver-salvarsan treatment or with the arsenical alone.

R. Duhot (*Revue Belge d'Urol. et de Derm.-Syph.*, page 88, 1921), says that in spite of its lower A content this product is superior to neosalvarsan. Its great advantage is that it reduces to a minimum the number of anaphylactic reactions, but on the other hand, having retained its "therapeu-nitritoid" activity, it renders the treatment of syphilis more efficient and less dangerous.

Dreyfus (*Munch. med. Woch.*, pages 268-269, 1922), thinks it superior to all other salvarsans. He has given 5,000 injections in 283 cases, beginning with 0.05, followed by 0.075, 0.1, 0.15, 0.2, 0.25, 0.3, 0.35 and 0.4 at intervals of from one to three days—total amount 6, 8 or 9 grams in from 6 to 10 weeks. He has given as high as 14 grams in 39 injections in 10 weeks in a case of cerebrospinal lues. He observes that neosilver-salvarsan combines the chemotherapeutic advantages of silver-salvarsan with the solubility and tolerability of neosalvarsan, is more active than neosalvarsan and does not oxidize so readily.

Galewsky (*Munch. med. Woch.*, March 10, 1922), believes neosilver-salvarsan far excels neosalvarsan and that the results obtained are nearly equal to those with silver-salvarsan, while much higher doses are tolerated. He recommends neosilver-salvarsan particularly for abortive treatment not combined with any other drug, and says it is also effective in combination with Hg or mixed with novasurol or cyarsal in cases of secondary lues, and combined with iodine has proved a very well tolerated and exceedingly effective preparation for treatment of tertiary lues.

Ullmann (*Wien. Klin. Woch.*, April 6, 1922,) finds that silver-salvarsan and neosilver-salvarsan are excellent antiluetic remedies in all stages of the disease.

"They act powerfully and quickly and occasionally even more so than neosalvarsan, especially on the spirochetes in the chancre, the fresh lesions of secondary lues, periosteal swellings, older gummatous infiltrations, the symptom complex of hereditary lues, the luetic fetus and occasionally on the neurorecidives of the brain, ear, keratitis and other obstinate clinical manifestations. In early latent cases, their effect on the Wassermann reaction corresponds to that of the combined mercury salvarsan treatment and it lasts a long time. Whether the silver-salvarsans have any special advantage over neosalvarsan in nervous syphilis has not as yet been definitely established, but seems likely; at any rate they seem to exert a greater absorptive effect than the combined mercurial treatment. The occasionally appearing slight neurorecidives should be considered as signs of a powerful effect and not as a contraindication for the preparations. The newer preparations also show less local tissue reaction and less injurious effects on the kidney.

Vasomotor irritation does not occur with the proper solution and dosage of neosilver-salvarsan. The lasting effect upon the disappearance of the Wassermann reaction, even without the use of mercury, is probably due to the chemotherapeutic spirillicidal effect of the silver. The facts that the solubility relationships of the neosilver-salvarsan are in no way inferior to that of neosalvarsan and that the decomposition of the solutions on exposure to air is less, make the newer preparations therapeutically equivalent if not superior to neosalvarsan. Up to the present time, experience and theory render these preparations equivalent to the other salvarsans. If mercury is not well tolerated or contraindicated and if the older salvarsan preparations are inadequate, neosilver-salvarsan is indicated.

Sulpharsphenamine

Sulpharsphenamine is prepared from arsphenamin, formaldehyde and sodium bisulphite and, according to Voegtlin, Johnson and Dwyer (*Pub. Health Reports*, Nov. 10, 1922,) it appears to possess "as far as the laboratory findings in some preliminary clinical observations are concerned certain definite advantages over other arsenicals." The drug is very closely related in chemical structure to neoarsphenamine, but these observers report that it has advantages over that drug in its ease of manufacture, greater stability, constancy of toxic and parasitocidal action and suitability for hypodermic administration. They believe, however, that, before the drug can be generally introduced it must be given an exhaustive clinical trial. They recommend its employment especially in patients with difficulty accessible veins and in those who show an unusual idiosyncrasy to intravenous treatment. They recommend that "in view of the fact that the parasitocidal action of sulpharsphenamine is slower than arsphenamine, the former drug might be of use in cases with indications of an extensive syphilitic involvement of the cardiovascular system in which a slow action of the remedy is desirable. Under these conditions a subcutaneous injection of sulpharsphenamine should be of value on account of the gradual absorption of the drug."

According to Voegtlin et al., *sulpharsenol* is a product similar to the one described by them, but the method of preparation of which has been kept a trade secret.

Sulpharsenol is a French preparation composed of arsenobenzol with glycol and sodium acid sulphite.

Dobel (*Lancet*, page 243, 1920,) regards the product as equal to any other form of the arsphenamines except as regards speed of disappearance of the spirochetes. He thinks the hypodermic administration is fool-proof and practically painless and makes it, therefore, an ideal

method for infants and those with difficult veins. He has seen no "side-effects" and the intramuscular injection is less painful than that of arsphenamine.

Montpelier (*Ann. Mal. Ven.*, Feb., 1921,) complains of the nitritoid crises following sulpharsenol. He says they have been more frequent than with other arsphenamines. He thinks this can be avoided by making the injection with extreme slowness.

Crawford and Fleming (*Lancet*, Oct. 1, 1921,) employed sulpharsenol in 35 children but found that it was not as efficacious as arsphenamine. This opinion was reiterated by Crawford in an article in the *Glasgow Med. J.*, p. 263, 1921.

Papagaay and Rinsema (*Acta derm. ven.*, July, 1921,) after treating 91 patients with sulpharsenol find that they cannot use subcutaneous injections of sulpharsenol unless conditions prevent employment of mixed treatment with neoarsphenamine intravenously.

The literature in 1922 regarding sulpharsenol is very deficient and the conclusion is that the drug has not been as efficacious as its progenitors first believed.

Silver-Salvarsan

This drug continues to find favor. It seems to clear up lesions with marked rapidity, is well borne, causes a minimum of reactions and gives good clinical and serological results. It is being especially utilized in the treatment of neurosyphilis.

Michelson and Siperstein (*Arch. Derm. & Syph.*, Aug. 1921,) note that silver-salvarsan has a pronounced effect upon visible lesions of syphilis. The effect on the Wassermann is variable. As a rule, however, in recent syphilis the positive reaction becomes negative after the first course of six to ten injections. There is apparently no reaction peculiar to silver-salvarsan which has not been noticed with any of the other salvarsan preparations.

Parounagian (*J.A.M.A.*, Nov. 26, 1921,) reports on the use of 4,290 injections of silver-salvarsan. He says that "the clinical manifestations in all stages of syphilis have responded to treatment with gratifying rapidity and thoroughness." In his findings Parounagian concurred with Kolle, Ritz, Galewsky, Hauck and Gennerich.

Major Charles M. Walson, U.S.A. (*Am. J. Med. Sci.*, Nov. 3, 1921,) believes that silver-salvarsan is the strongest spirocheticide as well as the least toxic of all arsenobenzol preparations.

Mengart (*Berl. klin. Woch.* 8, 1921,) observed a rapid favorable influence on the Wassermann reaction and on all luetic symptoms in 20 infants treated with silver-salvarsan. Secondary reactions were slight. The dosage was 0.006 gram per kilo bodyweight and a single course of treatment consisted of 10 injections at 5 day-intervals.

Neuendorf (*Berl. klin. Woch.* 6, 1921,) found silver-salvarsan clinically and serologically very effective in primary and secondary syphilis.

Soltmann (*Berl. klin. Woch.*, Nov. 1, 1921,) says advantages of the preparation are the effectiveness on the clinical symptoms and on the Wa.R. and the possibility of abandoning mercury in connection with the treatment.

Soltmann's findings are not concurred in by the majority of syphilologists who have used silver-salvarsan. It is the general feeling that mercury must be utilized with silver-salvarsan if the best results are to be obtained.

As instanced by Boas (*Brit. Med. J.*, Dec. 24, 1921,) who thinks silver-salvarsan is as good as and probably better than all early salvarsan preparations, he has felt that its efficacy does not extend to dispensing with mercury as a supplement to silver-salvarsan. His report is based on 315 cases.

An editorial in the *Cal. State J. Med.*, Aug., 1921, notes that a review of the literature would indicate that silver-arsphenamin is a more potent spirocheticide than any heretofore in use and one which should be used with the greatest care. This editorial advises the use of gray oil in conjunction with silver-salvarsan.*

Arnoldi (*Berl. Klin. Woch.*, 2, 1921), has found silver-salvarsan and sulphoxylate very efficient in cases of pulmonary syphilis.

Mengert (*Munch. med. Woch.*, page 68, 1921,) reports favorably on the treatment of congenital syphilitic infants with silver-salvarsan by injection into a vein. Concentrated solutions were used and there were only three reactions in 250 injections. The eruptions were rapidly influenced and the Wassermann was changed from positive to negative at the end of the first course of injections. The dose of silver-salvarsan was 0.006 gram per kgm. of bodyweight. 0.1 gram was dissolved in 5 cc. of sterilized distilled water and 3.20 cc. per kg. given at a single injection. The series comprises 10 injections at intervals of 5 days, the whole course of treatment consisting of three series, which was increased if the Wassermann did not become negative. Mercury was not given in order to test the action of silver-salvarsan alone.

Escher (*Ann. de dermat. et syph.*, page 257, 1921,) believes silver-salvarsan to be a valuable drug with a toxicity lower than salvarsan, and with equal therapeutic powers.

W. H. Guy and F. M. Jacob (*Am. J. Syph.*, Oct., 1921,) observe that the use in this country is still limited and that the few American reports are somewhat varied.

For example, Hazen condemns the product unqualifiedly, while others have found it of value. They believe with Walson that the drug is worth a trial but they do not believe the use of mercury should be discontinued.

After a limited experience, Guy and Jacob conclude that, weight for weight, silver-arsphenamin is more toxic than arsphenamin and that in the dosage ordinarily used is a less effective spirocheticide.

E. A. Fischkin (*Am. J. Clin. Med.*, April, 1922,) favors neoarsphenamin and silver-arsphenamin. He believes it requires from 25 to 30 injections in favorable cases of secondary or latent syphilis to produce a negative Wassermann. In discussing silver-salvarsan, Fischkin finds it produces better results with a considerably smaller amount of arsenic in comparison with those following other products. He says silver-salvarsan is parasitotropic in a greater degree than the older preparations and is less organotropic.

Colonel Harrison, of the English Army, writing in the *Brit. Med. J.*, says that he found silver-salvarsan very useful in cases of tabes and other syphilitic diseases of the central nervous system.

There seems to be a growing feeling among syphilologists that silver-salvarsan has a particular field in the treatment of neurosyphilis and its further utilization in this field of endeavor will be watched with interest.

Treatment of Syphilis in Infancy and Childhood

Leonard Findlay (*Brit. Med. J.*, p. 197, 1920,) says that salvarsan is given intramuscularly, intravenously, intrarectally or even through the medium of the mother's milk. He prefers the intravenous method, using the veins of the scalp. The head must be held immobile and the operation carried out as quickly as possible. The injection is made slowly through a Record syringe. In children over two years of age he uses the external jugular and in those older the veins at the bend of the elbow.

*The use of gray oil has been severely condemned in an article in the *J. A. M. A.*, by H. N. Cole.

As these veins are difficult of entrance, he recommends an anesthetic for the children. For the dosage the author uses 0.05 to 0.1 gram neosalvarsan, increasing in older children from 0.2 to 0.3 gram. For infants under six months he rarely gives more than 0.15 gram, injections to be repeated once or twice weekly until a definitely negative Wassermann is obtained. He believes in breast feeding wherever it is possible and only resorts to bottle feeding for very grave reasons. Findley utilizes mercury with salvarsan, employing an inunction.

John A. Fordyce and I. Rosen employ intramuscular injections in congenital syphilis (*Am. J. Med. Sci.*, Aug., 1921). They use an intramuscular injection of neosalvarsan and an oily suspension of bichlorid of mercury (bichloridol). The neosalvarsan is given in 0.075 for infants from 3 to 8 weeks old; 0.1 gram, 2 to 6 months old; 0.15 gram, 6 to 12 months; 0.15 to 0.2 from 1 to 2 years, injections given at weekly intervals. The mercury is given 1/10 and 1/8 grain or larger for older children. Courses consist of six injections of mercury and seven of the arsenical.

In *Arch. Derm. & Syph.*, p. 1, 1922, they emphasize the fact that an infant with active clinical signs of syphilis may give negative serological findings but usually only temporarily. The clinical diagnosis should always take the precedence over the laboratory diagnosis and proper treatment should be instituted. The intramuscular method of treatment as outlined above gives them good clinical results and they believe that systematic treatment begun early in the first week or two where possible will result in the clinical-serologic cure of the infant.

A case of transmission of syphilis to the third generation was reported by D. H. Patterson (*Brit. J. Child's Dis.*, p. 197, 1920,) in a boy 2½ years old with a characteristic facies of congenital syphilis, mentally deficient, with a positive Wassermann. The mother had a saddle-nose, the remains of an old keratitis, external strabismus and a positive Wassermann. The father's Wassermann is negative. The maternal grandmother died of locomotor ataxia. There was no evidence of reinfection of the mother.

Trauma sometimes plays a role in hereditary syphilis. I. H. Tumpeer (*J.A.M.A.*, Jan. 21, 1921,) reports two cases—a girl of 15 and a boy of 10 (half-brother and sister), congenital syphilitics—who were accidentally injured about the head. Soon after the girl developed epilepsy and the boy, primary optic atrophy.

Congenital syphilis is sometimes noted in the second generation.

Milian and Ville (*Bull. de Soc. d. dermat. et syph.*, p. 114, 1921,) know a boy of 7, son of a father killed in the war, who had no signs of syphilis but with a mother presenting stigmata of congenital syphilis including a perforation of the palate. Boy had extensive destruction of nose and palate with interstitial keratitis, rhagades, prominent frontal bossae and sluggish mental development. The maternal grandfather had long been tabetic.

E. L. Hunt (*Am. J. Syph.*, April, 1921,) gives the opinion that syphilis of the nervous system in children is common. Development may be early, so lumbar puncture should be routine. Parents should also have blood and spinal fluid examinations. He feels that treatment is not promising.

One of the serious conditions following congenital syphilis is noted by S. Hata (*Inter. J. Pub. Health*, July, 1921). He finds that 40 percent of married women who have had positive blood Wassermans were sterile. He thinks the percentage of sterility would be higher if all married women were subjected to the Wassermann test.

Lafaye (*Med. Sci.*, Aug., 1921,) recommends intravenous injections of neosalvarsan in *infantile syphilis* either into the external jugular vein, the veins of the scalp or the dorsal veins of the foot. In 50 cases treated by him there were only seven fatalities and the reactions were not severe.

Michael (*Urol & Cut. Rev.*, February, 1922,) insists on immediate treatment of *hereditary syphilis*. He is particularly partial to neosalvarsan and recommends jugular, temporal or other vein as the site of injection. He believes direct injection into the sinus is not dangerous and is convenient but it has not been used much. He thinks mercury should be combined with neosalvarsan. He insists that the first year at least three courses of mercury and neosalvarsan be given; two the second, and at least one in the third year, but the child should always be watched carefully for possible symptoms developing later.

H. Schussler (*Cal. State J. Med.*, p. 257, 1922,) gives a plan of treatment for *congenital syphilis*. Three intravenous injections of neoarsphenamin at 48-hour intervals; three mercury inunctions every week for eight weeks, then three more neoarsphenamin injections at 48-hour intervals. Mercury inunctions follow for four weeks more; after a rest of four weeks, a Wassermann is done. This schedule is repeated regularly until the Wassermann is negative. Then one more course is given with step 3 omitted, then all treatment is stopped and the Wassermann repeated every six months for three years.

Sodium iodid given continuously to all patients over a year old. It is omitted and a tonic of iron and codliver oil is substituted during the rest periods. Spinal puncture is done if the central nervous system is clinically involved, if the Wassermann is resistant to treatment, in cases with mental deficiency, and at the time of the first negative blood Wassermann if involvement of the nervous system has ever been suspected. Intraspinal treatment is rarely used and is not recommended for general practice. The dosage of neoarsphenamin varies with age, weight, arsenical tolerance, and general physical condition. It is much better in proportion than the doses commonly used in adults.

Inherited syphilis of the endocrine system has been noted by R. Barthlemy (*J. Nerv. & Ment. Dis.*, Feb., 1922).

Heredosyphilitic septicemia reaches the endocrine system as well as the other organs. Clinically the W.R. and the results of the antisiphilitic treatment confirm it, chiefly in the pluriglandular syndromes where the attack is rather superficial, fragmentary and curable. Also certain endocrine manifestations are bony, dental and trophic, troubles which were found precisely again in the dystrophic inherited syphilis. We believe that these consequences could be avoided by sufficiently precocious treatment.

A. Fournier believes that athrepsy often comes from a histologic touch of the endocrine organs. The origin of heredosyphilitic dystrophies is extended when the treponema does not act by itself, and locally there exist among the children of heredosyphilitics troubles which the antisiphilitic treatment is powerless to correct.

E. L. Parker (*Arch. Neur. & Psych.* p. 121, 1921,) reviews the literature and gives a summary of seven cases of *juvenile tabes* seen in the Mayo Clinic, which condition by the way was first described by Remak in 1885. Three of the spinal fluids in these cases were negative to the W.R. in spite of a positive blood serum. The insidious onset, the lengthy and even latent course of the disease, during which time no subjective complaint may be made, are in contrast to the frequent optic atrophy

and total blindness that may also occur. Frequency of incontinence of urine, the relative rarity of such striking phenomena as ataxia, girdle sensations, and lightning pains and finally the frequent parietic termination are features that stamp juvenile tabes with a distinctive mark and distinguish it from the adult type.

E. L. Parker (*Arch. Neur. & Psych.*, p. 121, 1921,) records seven cases of his own of *juvenile tabes*. Knee-jerk was absent in all; Argyll-Robertson pupil present in three; loss of reflex to light and accommodation in four; optic atrophy in three; lightening pains and crisis present in three; incontinence of urine in two. The blood Wassermann was positive in all but one; cerebrospinal fluid negative in three. The ages of the patients varied from 7 to 19 years.

Juvenile tabes is more common than is ordinarily believed. Among the reports in the literature this year, Acuna and Macera (*Arch. de med. des Inf.*, April, 1922,) note a case in a boy of 12 in which the disease was arrested under salvarsan treatment.

Bejarano and Covisa (*Soc. derm.-syph.*, Madrid, Feb. 3, 1922,) showed a 20-year old patient suffering from tabes and this boy also had a brother in the same condition. The patient exhibited showed a positive cerebrospinal fluid and all signs of active tabes.

Deafness may be due to congenital syphilis. Hennebert (*Arch. ital. di otol.*, p. 198, 1920,) reports three cases due to congenital syphilis. This cause may not produce the effect until late as two of his cases appeared at the ages of 8 and 15 years respectively.

Reinfection

The physician must remember that reinfection is a distinct possibility and it occurs too often for the practitioner's peace of mind.

Jacobi (*Arch. Derm. & Syph.*, Oct., 1920,) summarizes his conclusions as follows: (1) the question "is syphilis curable" cannot be answered definitely in the light of present knowledge; (2) the occurrence of reinfection in syphilis may be expected as an established fact; (3) reinfection, however, is by no means evidence of curability. These two conceptions do not stand and fall together as many believe; they are not contingent on each other and should be dissociated in the interest of clear-thinking and unbiased judgment.

H. Breide (*acta derm. ven.* 3-4, 456, 1920) reports a case of undoubted reinfection and Jeanselme and Althabegvity (*Bull. soc. fr. d. derm. et syph.* 1:10, 1921,) add their opinions and give advice as to the examination and history of the case.

Carle (*Ann. des mal. ven.*, July, 1922,) says that, as a result of his study of reinfection, many instances must have escaped recognition in the past. Old syphilitics consider themselves safe from reinfection. He advises warning against the danger of reinfection, especially when a man is married, to protect his wife.

L. Arzt (*Berl. Klin. Woch.*, 25, 690, 1921) gives a genital reinfection in girl of 20 and an extragenital reinfection in a married woman of 29.

Antenatal Treatment

John Adams (*Brit. Med. J.*, Jan. 14, 1922,) believes that the best time to treat all cases of syphilis, whether ante, post-natal or acquired, is at the earliest possible moment available and this especially applies to newly born babies. He suggests that treatment be given intramuscularly in the gluteal region. He continues treatment for two years. He also recommends breast feeding, supplemented by some form of artificial food to patients who have mercury as well as salvarsan.

In discussing congenital syphilis before the Section for the Study of Disease in Children of the Royal Society of Medicine (*Brit. Med. J.*, March 5, 1922,) Dr. Adams said that he had not seen a case of secondary syphilis in a child during the last two years in his own clinic.

Dr. J. E. R. McDonagh said that if a woman contracted syphilis up to the fifth month of pregnancy, the chances were that the child would be born syphilitic; if in the sixth or seventh month, the chances were equally divided; at the eighth or ninth month the chances were that the child would be born not syphilitic. Many infants contracted syphilis by nursing a syphilitic mother.

Dr. Langmead, reviewing the discussion, says its most important feature was the general consensus as to the extreme value of the treatment of pregnant syphilitic women.

George Gellhorn (*Surg. Gyn. & Obst.*, 32, 535, 1921) shows that during pregnancy syphilis in the mother is aggravated. There are new local manifestations especially of the mucous membranes. Primary lesions are said to be larger and more persistent. Condylomata increase in size and the swelling of the glands frequently terminates in suppuration. During labor syphilis in the mother may cause abnormal resistance of tissues, or obstruction of the vaginal outlet. During the puerperium the greatest danger lurks in infection because of retained membranes. The author urges energetic and systematic treatment of such women.

J. A. Fordyce and I. Rosen (*Arch. Derm. & Syph.*, Jan., 1922,) urge that every prospective mother should receive a routine Wassermann examination and that the proper treatment of a syphilitic mother during pregnancy will undoubtedly result in the birth of a healthy infant.

At the meeting of the Royal Medico-Chirurgical Society of Glasgow, reported by *N. Y. Med. J.*, Jan. 4, 1922, Dr. J. R. C. Greenless quoted statistics to show that antenatal treatment with mercury and potassium iodide had not been very successful but, on the other hand, that where cases, treated in the Royal Hospital for Sick Children in Glasgow, had been carried out with arsenic and mercury, all showed successful results, some of the cases having been followed up for as long as seven years. In this he was backed up by Dr. Leonard Findlay who said that prophylaxis was beyond question far better than curative treatment.

Neurosyphilis

There seems to have been an increase in neurosyphilis of late due possibly to the conditions incident to the war. This means that every syphilitic patient must be given intensive treatment and that he cannot be discharged until the spinal fluid reveals the fact that he has no spinal syphilis. When the Wassermann has become negative it should be the practitioner's duty to keep it negative, and we are coming more and more to the belief that a patient once having had syphilis should always be under observation and possibly have a certain line of treatment from year to year.

Cestan and Riser, of Toulouse, kept 200 syphilitic under observation for three years. A study of their spinal fluid during this time revealed that 157 of the 200 showed pathological modifications of the spinal fluid.

The Incidence and Treatment of Cerebrospinal Syphilis

Hanssen (*acta med. Scand.*, Jan. 14, 1921,) in examining 440 cases in Bergen, Norway, found that 96 had a positive W.R. In 53 of these 96 cerebrospinal syphilis was diagnosed, tabes and general paralysis being included in this category. The author found that 25

percent. of the sailors admitted to an asylum in Bergen suffered from general paralysis. As Bergen was one of the busiest ports in Europe during the war, this accounts for this large number. In a 10-year period among the total number admitted to the same hospital only 3 percent. suffered from general paralysis. Hanssen advocates salvarsan, mercury and potassium iodide, but is not in favor of intraspinal administration.

Solomon and Klauder (*J.A.M.A.*, 77, 1701-6, 1921) urge the importance of clinical diagnosis in neurosyphilis, as the spinal fluid may be negative in cases of active disease. According to these observers, the clinical types in which the fluid is often negative are: (1) vascular syphilis with thrombosis, hemorrhage, cerebral aneurism, or arteritis obliterans; (2) tabes, cerebral gumma, cranial paralysis, Erb's spastic paraplegia, syphilitic epilepsy, and syphilitic dementia. Of the chief points in diagnosis, the Argyll Robertson pupil is diagnostic of neurosyphilis, but sluggish reaction and irregularities in the form of the pupil are suggestive but not pathognomonic of syphilis; however, if they occur in a known syphilitic they are probably syphilitic in origin. The same with aphasia, reflex disorders, affection of the cranial nerves, convulsive attacks, etc. The Wassermann reaction in the blood may be either positive or negative in these cases.

As regards the spinal fluid, the authors mention the statement of Head and Fearnside that in pure cerebral syphilis, without implication of the cord, the fluid is nearly always negative. In a previous study of 28 autopsies, Solomon showed that the gold test varied in the fluid taken from the different parts of the brain; further experience has shown that this applies to the other tests and the globulin content, the cell count, and the Wassermann reaction. In general paralysis, for example, the fluid from the ventricles may be negative and the lumbar fluid positive. In the absence of pathological changes in the spinal fluid, the best test, according to Solomon and Klauder, is a provocative injection of arsphenamine, which will render the fluid positive if neurosyphilis is present. They regard a negative spinal fluid in progressive tabes as evidence of a primary degeneration of the posterior columns, with no inflammatory lesion. Other cases of tabes which may have negative spinal fluids may be abortive cases, usually confined to pupil changes, or cases arrested by treatment.

P. F. Boffill (*Rev. Med. Cub.*, July, 1921,) believes that the use of mercurialized and salvarsanized serums is entirely unsuccessful and that repeated puncture of the spinal canal exposes the patient to accidental complications. He favors sodium iodid, together with intravenous salvarsan and mercury.

E. N. Boudreau (*Med. Rec.*, p. 535, 1921) thinks that vigorous intravenous salvarsan treatment combined with mercury and iodides is efficacious in a large number of invasions of the central nervous system, but in those cases which do not respond, he advises the Swift-Ellis-Ogilvie method. He does not seem to favor the Dercum method of spinal drainage.

Paulini (*Bull. et mem. de la Soc. med. des hop. de Par.*, March 17, 1921,) notes that nearly all tabetics, apart from those with noteworthy aortic lesions, show a low blood pressure—never exceeding 130 and ranging from 60 to 85. Tabetics nearly always suffer from asthenia, which is increased during crises and lightning pains.

Marinesco found that a hypodermic injection of 1 mgm. of adrenalin has a rapid sedative action in gastric crisis with the removal of pain and complete cessation of nausea and vomiting in a few hours.

(Concluded on page 23)

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Mass Psychopathology

Some people appear mystified over the abnormal psychology of large groups of our citizens whose one-hundred-per-cent. patriotism and methods of "Americanization" are now taking the form of Ku Kluxism. After sedulous sowing of the seeds of hate in countless morons for the purposes of war, there is wonderment when that passion refuses to be stilled and seeks further scapegoats. Ku Kluxism is a logical aftermath, especially in those States where illiteracy and child labor have for so long served as indexes of a low intelligence level.

The dangers of such a sowing of hate were always apparent enough to the thoughtful.

The present situation is only a balancing of accounts.

There are worse burdens than war debts of a monetary order. Reparations and indemnities are not limited to the paying of cash by defeated combatants. We are saddled with a moral pestilence, the roots of which are obvious to all but imbeciles.

Professor Walter Pitkin, of Columbia University, has shown very conclusively to how great an extent "civilization" is still influenced by what he calls the child mind. Religion, morals and politics are deeply colored by this influence. Only science seems to have rid itself of the incubus.

Iodid Therapy

The therapeutic activity of the iodids is essentially the same as that of iodine. The physiological action of iodine used to be put down by the authorities as a mystery. Now, however, we know that iodine stimulates the thyroid, and we know what the physiologic action of the thyroid is upon the general metabolism, on the excitability of the respiratory center, and on arterial vasomotor

tone. It would seem as though whatever effects we obtain in the treatment of those conditions and lesions long associated with the giving of iodids were due to stimulation of the thyroid rather than to any direct influence of the iodids themselves.

Why, then, would it not be rational to employ thyroid preparations in an experimental series of such cases, comparing the results with those of the iodids themselves, and also with the results of a combination of the iodids with thyroid preparations?

Injustice to Certain Cults

It was a great stroke of uncanny genius to found a cult which would have the effect of organizing selfishness on a huge scale, and at the same time enable individuals suffering from weak character and inadequate personality partially to adjust themselves to life. For selfishness means inadequacy. Even the ordinary conditions of life call for a fair degree of adequacy; hence the manifestations of selfishness by weak personalities under ordinary as well as extraordinary conditions.

One of the evidences of inadequacy is what appears to be a physical disorder but which is really a complex that the individual creates as a psychical refuge. Under the camouflage of this disorder, pointing perhaps to the digestive apparatus or the nervous system, the masquerader can evade the obligations of life.

The adoption of a cult denying, let us say, the reality of disease, enables the morbidly preoccupied one to organize his psychic activities in a pleasurable way—one might say in a masturbatory manner.

We must do such cults justice. Insofar as they transform painful preoccupations into pleasurable ones and partially release the weakling for productive energy of some sort, they are not unneeded. This they really seem to do in many cases. Such individuals never render human service of the higher sort, for example, they will not care for the sick, but they are frequently able to acquit themselves fairly well in the world of business.

A Drug Renaissance

The discovery of the remarkable effects of quinidine upon the heart rather puts the therapeutic nihilists upon the defensive. A few more such innovations and the materia medica will be rejuvenated and the nihilists confuted. One is tempted to write about such a turn of affairs in a spirit of keen irony.

Just as the pessimist concludes that drugs are played out along comes an agent of extraordinary power. It is like the unheralded advent, in the world of the drama, of plays like *R. U. R.* and *The World We Live In*, just as pessimists had concluded that the stage was a barren place.

It is not unlikely that many more therapeutic discoveries of tremendous moment are in store for us—the days of drugs would seem to be by no means numbered. Mayhap the future holds promise of a drug therapy cast upon a far higher plane than heretofore. The optimist may easily fancy a drug renaissance looming before us, beside which the achievements of the past will pale.

Physiology of the Dance

A German savant points out that when a waltz is being played a considerable number of people remain off the floor, while those who do dance last about one round. The modern dances, on the other hand, bring all to their feet and are invariably danced out to the last quivering note of the orchestra. He accounts for this

on the score of the strenuousness of the waltz and its consequent strain on the heart, whereas the modern dances can be carried on hour after hour without the slightest sign of fatigue. Hence the tremendous growth in the popularity of the new type of dancing.

We suspect that there is a situation here analogous to that accounting for the tremendous appeal of the movies. It is the defective hearing of the majority of people which makes the movies so alluring. In the same way, it is the poor heart reserve of our tobacco-soaked masses which explains the popularity of the modern dances.

The willingness of most Americans to sit on the bleachers year in and year out and never hit the pill themselves suggests as much physically as psychologically.

A Doubtful Project

And now comes an ingenious gentleman with a new solution of the New York transit problem. He says that all that is necessary is to extend the principle of daylight saving throughout the night. "The millions of workers of the city must split themselves into two divisions, half to continue to work by day and the remaining half to take up night work." It would follow, obviously, that the enormous strain on the city's traction lines would be relieved and our office buildings and factories fully utilized.

In the mind of the thoughtful physician, however, misgivings arise as to the probable shortcomings, from a medical standpoint, of such a scheme.

Brutes

The *New York Times* recently made a shrewd point against the anti-vivisectionists. They are inordinately fond of denouncing their opponents as "brutes." Yet this is a term which ought to connote something dear to them. If this term, in the subconscious minds of the anti-vivisectionists, stands for something vicious and obscene, is it not logical to discount their protestations of animal love very considerably?

ANAPHYLACTIC NASAL CONDITIONS

HAROLD HAYS, M.D., F.A.C.S.
New York.

The hypersusceptibility of the nasal mucosa to all sorts of irritations, either local or general, extrinsic or intrinsic to the body organism, is a well-known fact but it is only within the past few years that we have become acquainted with the various allergies which affect this part. For example, hay fever, and the asthma associated with it, was always considered a nasal condition because most of the symptoms were manifest in the nasal mucosa. It was known that the pollens of plants had something to do with the bringing on of the symptoms but today we feel assured that hay fever is a systemic condition, due to the proteins of various pollens of plants and that the nasal condition is but one of the various manifestations.

But during the months when plants are not flowering, patients will complain of symptoms which are analogous to those of hay fever. There may be merely a simple rhinorrhea or there may be frequent attacks of sneezing; or there may be a feeling of stuffiness in the nose.

How can one account for such symptoms? If an examination of the nose is made, one will find a swollen, turgid mucous membrane, a membrane which is so edematous that it is almost impossible to shrink it with cocaine and adrenalin solutions. Repeated local treat-

ments may give some temporary relief; operations upon the nose will often make the condition worse instead of better.

After local causative factors, such as a latent sinus disease or some other irritation within the nose is ruled out, one must consider the possibility of some irritation within or without the body as the true etiology. The discovery of the exact cause is not always easy. Sometimes the entire physical system of the patient is out of order, sometimes there is a manufacture of certain toxins within the intestinal canal; sometimes an irritating protein is ingested with the food; sometimes the foreign protein reaches the system from without, such as the breathing in of irritating materials such as horse dander, cat's fur, chicken feathers, etc. It may be possible that only food is at fault; it may be possible that just one external protein is at fault. Although we realize now that hay fever is an anaphylactic condition due to the proteins of the pollens of plants, mainly golden rod and rag-weed, we shall leave them out of consideration here.

Patients who suffer from repeated rhinorrhea or attacks of sneezing should be tested out in the laboratory against the various proteins which may give rise to the condition. The importance of discovering the one etiological factor is manifest; for the cure then becomes a simple matter. All one has to do is to eliminate that factor by taking it out of the food or getting rid of it in some other way. The tests can be made simply. The patient is first told to write down the various articles of food which he eats during a certain week. To this list is added the various external proteins with which he comes in contact in his daily life; and if there is much secretion from the nose, one may add the proteins of bacteria. The tests are made on the inside of the forearm. Scratches are made on the arm with a sharp scalpel and a small amount of the protein (these are manufactured by various reliable firms) is powdered over the wound. At the end of a half hour, there should be a manifestation on the arm if the patient is susceptible to any of the proteins for which he is being tested. It will appear in the form of an urticarial wheal. We have had patients whose symptoms were due to tea, coffee, starchy foods, bread, milk, beef and various external proteins such as chicken feathers (often found in pillows), rice powder (so often used in face powders), cat's fur, horse dander and so on. The only treatment consisted in the elimination of these factors.

2178 Broadway.

Private Duty Nurses As Educators in Venereal Diseases

There are many things which a nurse should know and do in her position as private nurse, to make herself a valuable factor in venereal disease control, says Ann Doyle. Some of them are:

1. She should be acquainted with the subject of venereal disease, at least sufficiently well to enable her to discuss the condition of patients with physicians without incurring their displeasure.

2. She should know the federal, state, and city provisions for control, in order that she may lend moral support to the physicians in getting cases of venereal diseases reported.

3. She should be familiar with the various agencies and societies interested in social hygiene and the prevention of diseases, in the community in which she lives, in order that she may gain assistance in getting objectionable conditions corrected.

4. She should be careful to consult physicians of the highest professional reputation.

5. If she is morally certain that the patient for whom she is caring is not being properly supervised and public health is endangered thereby, she should seek redress through medical fraternity whenever possible.

6. She should consider it a matter of honor not to discuss unnecessarily, or in any way in which it might do damage, the case of anyone suffering with venereal disease.—(*Am. Jour. Nursing*, Sept., 1922.)

(Concluded from page 5)

of these patients during the colorimetric tests showed a metabolism rather close to the average normal level, the respiratory quotients were normal nor was there evidence of abnormal respiratory metabolism following the ingestion of large test meals of glucose and protein. (d) The observations on arthritis deformans do not indicate that it is a disease of metabolism, but, if infectious in origin, the infection is not accompanied by increased basal metabolism or by toxic destruction of body protein.

During the past year considerable literature has appeared concerning the use of quinidine in the treatment of auricular fibrillation and allied cardiac conditions. The conclusion, although the evidence is conflicting, is that the remedy is inefficient. However, it is hoped that those employing cardiographic investigations, having commenced with remedies other than digitalis will increase their number and in this way the indications for their use will be based on the results of laboratory experiment upon subjects suffering from cardiac disease and may confirm or modify those based upon clinical observation.

(Concluded from page 11)

tial forms of uterine bleeding. If these statements are true, it would seem that every gynecologist and every general surgeon doing gynecology should have access to sufficient radium, say 100 to 150 mg., to carry out this form of treatment. Furthermore it must be apparent that such treatment to be successful, requires that the selection of cases suitable for irradiation remain in the hands of those who have had special training in gynecological diagnosis as well as radium therapy. The indiscriminate intra-uterine use of radium cannot be too strongly condemned, in as much as such practice can only bring discredit to a very valuable therapeutic agent.

Meigs in his "A Study of Adenocarcinoma of the Fundus of the Uterus" (*Am. Jour. Obs. & Gyn.*; 4; Sept., 1922; 241), states that there are 62.5 per cent of his 44 cases that are alive and well 5 years or more after operation. He recommends complete hysterectomy (not Wertheim's Method) in this class of cases and, furthermore, since 5 of his cases showed evidences of metastases in the adnexa, he advises double salpingo-oophorectomy along with the removal of the uterus,

Puerperal Sepsis

In the United States alone, there are between 10,000 and 12,000 deaths every year that can be attributed to puerperal sepsis. There must be many more who are infected that do not die, but have the "ear marks" of this infection with them for a long time after "recovery" and, indeed not a few who carry them to their graves. And why such state of affairs? The answer is easy. In the first place, almost anybody, with or without an M. D. degree, is, after a few months' instruction, allowed by the law, to practice obstetrics; and secondly, any M. D., even without special training, by custom or otherwise, is permitted, not only to assume the role of consultant, but to perform obstetric operations that he is manifestly not qualified to perform.

But, notwithstanding these facts, how can we reduce this most wanton waste of human life? Prophylaxis is the key word. (Altman, *Southern M. J.*; 15; Oct., 1922; 829). By this is meant prenatal care of the pregnant woman throughout her pregnancy, being sure that her diet and mode of living is properly regulated and that her blood pressure, urine and general health is looked into every month. Having previously determined the size of the pelvis in every case, the obstetrician is in a

position to prognosticate, without intra-vaginal manipulations, the probable outcome of a given case. No obstetrician of today has a right to the name who is not proficient in rectal examinations or who manually removes every placenta before the physiological processes of the third stage of labor have had a chance to expell it.

If by educating the public to the point where it will demand better obstetrics, then our medical schools will be compelled to teach better obstetrics and our physicians practice better obstetrics and finally, thereby, the morbidity from puerperal sepsis will be greatly lessened.

Pre-Natal Care

Few subjects are of greater importance to the physician and, indeed, to the public in general, than the question of pre-natal care. Just as asepsis has saved thousands of mothers, likewise pre-natal care will protect them from the ravages of the toxemias of pregnancy; will eliminate the useless "painful pounding" in the effort to push a large head through an impossible pelvis; and finally, will reduce the fetal mortality rate, which at present, is far too high.

It has been estimated that during the year 1921 about 80,000 babies lost their lives from improper care at or very soon after birth. Such statistics are shocking and should not exist in these United States. What shall we do about it? In his paper "Regarding Recent Efforts to Reduce Mortality in Childbirth" (*Am. Jour. Obs. & Gyn.*; 4; Sept., 1922; 264) Rice formulates the following conclusions:

1. Education of the public regarding the dangers of childbirth without proper pre-natal care, must be continued.
2. Clinics for providing pre-natal care should be multiplied.
3. Maternity hospitals should provide care for a larger number of abnormal cases.
4. Medical schools should educate their students to give more thorough pre-natal care to patients, provide facilities for training students in care of more normal cases and should emphasize the necessity of obtaining special training before performing obstetrical operations.
5. Provision should be made for the training of visiting nurses in practical obstetrics to assist in providing care in the rural districts.

Specifically, the remedy lies in educating the public and the physician to appreciate pre-natal care and having each and every pre-natal clinic or maternity welfare center linked up with a hospital that is adequately equipped to take care of all maternity cases sent to it.

643 St. Marks Ave.

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G. Hammerstein (*Berl. klin. Woch.*, p. 199, 1921) believes that *cerebrospinal syphilis* is most readily influenced with intraspinal injections of salvarsan, but he says the superiority of this line of treatment as compared with intravenous treatment is not so definite that its application, which is always difficult and dangerous, can be regarded as entirely desirable. In practice he recommends that physicians first employ intravenous treatment and leave the intraspinal for the most persistent cases.

The question is often asked if *tubes can be cured*. Dreyfus (*Derm. med. Woch.* 14, 1921) reports a case under observation since 1910 which in the first four years of treatment showed an increase in symptoms, which has improved to such an extent that one might practically speak of a cure after ten years. The spinal fluid was normal. The treatment included 10.8 grams of salvarsan, 9.1 grams neosalvarsan and 0.6 gram copper salvarsan. One swallow does not make a summer but it would seem that the favorable outcome of this case may offer some hope.

Pulay (*Deut. med. Woch.*, Feb. 16, 1922,) thinks that a person treated for syphilis of the internal organs or of the nervous system gets undesirable results from underdosage as well as from overdosage. On account of the various unpleasant results following the treatment of *tabes*, in which different symptoms arose in different patients, he thought of combining salvarsan with lime to overcome some of the irritating reactions. For the lime product he chose afenil, in which salvarsan is soluble, and found that as a result this salvarsan-lime combination enabled him to treat three cases of *tabes*, four of aortic lues, and five of latent lues, with patients suffering from headache, loss of weight and fatigue, with satisfaction. The latter cases showed marked improvement and an increase in weight and the reactions were overcome in all of them. The salvarsan is dissolved in afenil solution until a clear solution is obtained and then injected in the usual way. He also used this lime therapy with great success in combination with iodine in every case where iodine treatment had to be given up because of catarrh caused by the iodine.

Henry F. Stoll (*Am. J. Med. Sci.*, May, 1922,) feels that intravenous arsphenamin with mercury and iodides will prove sufficient in many cases of *tabes*, especially the early ones. When the symptomatic or serologic response to intravenous treatment is unsatisfactory or when grave cardiovascular lesions coexist and make frequent intravenous treatment hazardous, intraspinal treatment should be instituted. He feels that the amount of treatment should not be determined solely by the Wassermann test, but that the general condition of the patient should receive serious consideration.

Keidel (*Urol. & Cut. Rev.*, Jan., 1922,) says that the central nervous system is invaded by treponema in from 25 to 35 percent. of cases and that intraspinal therapy is made necessary by the inaccessibility of foci of infection to substances in the blood stream. He thinks failure of general intensive treatment to cure neurosyphilis may be due to the degree of perivasculitis present at the time treatment is begun. He thinks the application of intraspinal therapy should be restricted to those early cases which prove refractory to the ordinary methods of treatment and to all cases with organic pathologic changes produced by long contact of the organism with the tissues.

Prof. Oskar Fischer, of Prague, in a letter in the *Lancet*, Sept. 9, 1922, discusses treatment of neurosyphilis by artificial leukocytosis. Under the name of phlogetan he has introduced a preparation of nucleoproteins. The idea behind this procedure is to produce an artificial pyrexia with accompanying leukocytosis in the hope that the course of the primary infection may be favorably modified.

In the treatment of neurosyphilis, (*Med. Sci.*, Sept., 1922,) discusses the subject in some detail, bringing out the various methods in vogue. Kaliski and Strauss (*Arch. Neur. & Psy.*, 7, 98-112, 1922) are of opinion that there is a tendency to overestimate the importance of changes in the spinal fluid as indications of pathological changes in the central nervous system. From examination of thousands of fluids in syphilitic and non-syphilitic cases, with and without definite involvement of the central nervous system, they conclude that 8 to 10 lymphocytes per cubic mm. is within the normal, and that a slight increase above this with no clinical signs, no increase in globulin, and a negative Wassermann reaction is probably of no significance. On the other hand, cases of definite neurosyphilis often show no increase of cells. Increase of globulin, which is generally proportional to the increase in cells, they consider of little importance by itself.

Of greater importance is a positive Wassermann re-

action, especially if present in all dilutions from 0.1 c.c.m. upwards. In short, these observers believe that pleocytosis and increased globulin with a transient Wassermann reaction signify a temporary reaction due to limitation of the pia-arachnoid, of doubtful significance as regards future neurosyphilis. Pleocytosis, increased globulin, and a definite Wassermann reaction in all dilutions in early syphilis, however, they regard as probably the earliest signs of neurosyphilis.

With regard to the time and manner of infection of the central nervous system Kaliski and Strauss remark that morphological evidence is lacking and biological reactions are inconclusive. The theory that spirochetes enter the central nervous system in the early stages of infection, lie dormant, and subsequently multiply in response to some unknown stimulus they consider to be non-proven. It is possible that the spirochetes wander into the central nervous system later, and, finding a less resistant or more fertile soil, multiply therein.

Fraser and Duncan (*Brit. J. Derm. & Syph.*, 33, 251-64, 281-90, 1921) also dwell upon the inconclusiveness of the biological reactions and consider that in the absence of clinical signs a normal spinal fluid may indicate either success or failure of the central nervous system to react, and that a pathological fluid may indicate either damage or protective reaction, and thus cannot be decided in the absence of symptoms. Clinical evidence must, therefore, be correlated with laboratory findings.

John A. Fordyce, the leading syphilologist of this country (*Am. J. Syph.*, April, 1922,) is of the opinion that intraspinal treatment cures certain types of neurosyphilis in which intravenous treatment alone or when combined with spinal drainage has failed. Spinal drainage is of some value and may in certain cases facilitate the entrance of arsphenamine given intravenously. It more often fails more than to reduce the cell count, and has little or no effect on the Wassermann reaction or the globulin content. It cannot be endured for a sufficiently long time in chronic types of neurosyphilis to effect a cure.

Paton (*Brit. J. Ophth.*, July, 1922,) in discussing *tabes* and optic atrophy believes that all manifestations of syphilis are due to the local production of toxins in the presence of the spirochetes but that reaction between the spirochetes and the tissue varies at different periods and in different tissues, either because of a diminution in the number and virulence of the spirochetes or because of differences in the resisting power of the tissues to the action of the toxin. The fleeting character of some diplopias may be due to disturbance in the asphorent proprioceptive impulses from all the oculomotor muscles and muscles of the head and neck.

R. Henneberg (*Klin. Woch.*, July 8, 1922,) does not believe *tabes* can be cured. He says the spirochetes produce very injurious effects on the posterior nerve roots and that the results of the syphilitic inflammatory processes are cicatricial connective tissue changes which cannot be influenced by any antisiphilic treatment and are as injurious as the syphilitic inflammation itself. He seems to believe in mercurial treatment in early *tabes*, together with salvarsan or neosalvarsan and found that improvement occurred not infrequently as regards certain symptoms. For the pains of *tabes* he uses such products as pyramidon, veronal, phenacetin and luminal, and treats other symptoms as they arise.

M. Valin (*Repert. Pharm.*, p. 144, 1922) writes on this reaction for the diagnosis of syphilis of nervous centers and tuberculous meningitis. It is a modification of the method of Gallian, LaRoche and Lechelle. It is explained by Valin on the basis of increased concentration of globulin and serine in the cerebrospinal fluid in the pathological states.

Visceral Syphilis

Visceral syphilis is becoming better known as physicians are learning that many of the cases which hitherto have baffled their skill become simple when the Wassermann is taken. The x-ray is also a valued diagnostic agent.

Gastric syphilis is much more common than has been ordinarily believed and occurs usually in the fourth decade of life, while cancer appears usually later. Gastric syphilis is seen usually about ten years after the initial lesion and has no definite symptomatology. The diagnosis depends largely on the elimination of gastric cancer, and serology and roentgenology play a part in diagnosis.

In intestinal syphilis the x-ray is the leading factor. It has been rather generally observed that dyspepsias which seem to be incurable disappear completely under antiluetic treatment.

Funk (*Pa. Med. J.*, p. 310, 1920) showed that of 1,200 supposed cases of tuberculosis in Jefferson 6 percent. were not tuberculous and 4 percent. were pulmonary syphilis.

Pontano (*Polyclin.*, p. 1299, 1920) reports a case in which the standard antisyphilitic treatment was very effective.

All writers on visceral syphilis are of the opinion that if the Wassermann and x-ray are utilized carefully and intelligently many difficult cases can be cleaned up.

Syphilis of the lung is reported by Wile and Marshall (*Arch. Derm. & Syph.*, July, 1921) and they present cases of this type.

Benoit (*Bull. et mem. soc. med. de hop. de Paris*, May 26, 1921) believes syphilis of the lung is readily amenable to specific treatment but its close resemblance to advanced tuberculosis makes its recognition important. He recommends the arsenicals and inunctions of mercurials with or without iodine.

Ficacci, (*Rev. Osped.*, Feb. 15, 1921) says that syphilis of the lung is probably more common than is generally believed, and briefly records six cases with a photograph of an affected lung. Clinically one may suspect syphilis if the symptoms are of long duration, if there is a positive W.R., frequent hemotysis, and the disease chiefly affects the middle and lower lobes of the right lung, with marked evidence of fibrosis, bronchiectasis, a slow course and no fever and no tubercle bacilli, a good state of the general health, other syphilitic lesions present, and no history of previous illness likely to cause bronchiectasis.

H. H. Hazen, (*Am. J. Syph.*, Vol. 6, No. 2; 1922) in the course of a lengthy and systematic article on practical points concerning syphilis, observes that syphilitic affections of the lungs continue to remain a source of dispute among clinicians and pathologists, the former claiming them fairly common while the latter regard the invasion of the lungs by syphilis as rare. Clinically, four types are described. The patients may be well nourished and show no signs of pulmonary trouble or they may show indications that are diagnosed as pulmonary tuberculosis of early type. Usually there is some loss of weight, some cough with expectoration and occasionally night sweats and fever. The second type of syphilis is where there is a definite local cavity formation due to the ulceration of a gumma into the bronchi. These cases usually resemble tuberculosis very closely. The third group are the so-called syphilitic phthisis cases. In these there is a progressive fibrocaseous course that cannot be distinguished clinically from tuberculosis, while the fourth type is the fibroid, which is clinically indistinguishable from fibrosis due to any cause.

Harlow Brooks, (*Am. J. Syph.*, April, 1921) in a necropsical study of 50 cases of syphilis of the heart found a coronary arteritis in practically all. Cardiac gummas were seen in five and brown atrophy in seven. Endocarditis was discovered in 37 and a mitral or aortic involvement in 17. All forms of luetic lesion except chancre may be found in the heart. Treatment depends upon correct diagnosis and proper treatment and rest is an essential.

Etienne, (*Arch. des mal du coeur*, Oct., 1921); in a report made to the 14th French Medical Congress at Brussels states that aortitis is extremely frequent in syphilis. Simple aortitis without lesions of the sigmoid valves or aneurysmal dilatation forms about 40 per cent. of all the aortic localizations of syphilis. Aneurysm was found in 30 per cent. of Etienne's cases—an unusually high proportion. As regards the clinical symptoms of syphilitic aortitis sometimes the condition is entirely latent, while in others serious symptoms arise with alarming suddenness. Pain assumes a different character according to the patient.

McKenzie, (*Glasgow Med. Jour.*) notes that syphilis is the most important factor in inflammatory vascular degeneration. *Aortic endocarditis* is a frequent sequel or accompaniment to syphilitic aortitis. The cardiac muscle is the seat of syphilitic degeneration far more than is commonly recognized.

T. McCrae (*Pa. Med. J.*, Jan., 1922), emphasizes careful attention to the condition of the blood and the proper treatment for anemia. He believes in small doses of arsphenamine or neoarsphenamine, especially in the presence of aortic disease, with none to be used in hepatic syphilis. Mercury should be regarded as an important aid in visceral syphilis. Treatment should be given as intensively as possible and repeated once a year for five years or, better still, during the duration of the patient's life.

Harold Wiltshire (*Brit. Med. J.*, April 29, 1922), says infection begins in the secondary stage of syphilis and usually occurs as a primary aortitis and not as a primary endocarditis. In treatment great care should be exercised in giving salvarsan to cases where the coronary arteries are involved. It is safer to begin with a course of mercury iodide, with a rest in bed, and followed by salvarsan given cautiously. Prognosis is extremely bad.

Fowler (*Brit. Med. J.*, June 4, 1921), quotes a case of benign non-specific ulcer in the stomach of a female syphilitic subject. He thinks organic syphilis of the stomach is less infrequent than was formerly supposed. The gross lesions are diffuse infiltration or gummata progressing to ulceration.

Glaser (*Med. Klin.*, Oct. 6, 1921), says that the absence of free hydrochloric acid in the gastric juice is considered under some circumstances as diagnostic of syphilitic gastric ulcer, and he gives a report of a case to back his statement.

Syphilis of the liver may be congenital or acquired. In the former the diagnosis depends on hepatic enlargement with other evidence of lues or a positive Wassermann, while in the acquired type, jaundice occurs with the roseola and an enlargement of the liver and spleen may be helpful. When the liver is affected with a tertiary syphilis it sometimes simulates carcinoma, sarcoma, echinococcus cyst, leukemia or pseudo-leukemia.

Pathault (*Bull. de la soc. franc. d. derm. et d. syph.*, No. 10, 1922), draws attention to the frequency of mild intestinal symptoms due to syphilis. Dyspepsia associated with hyperacidity is a common manifestation of syphilis and rapidly amenable to antisyphilitic treatment.

By carrying out a strenuous course of antisyphilitic treatment Pathault aids in removing both dyspepsia and syphilis and prevents a more serious condition such as chronic gastritis and gastric ulcer.

Synge (*Dublin J. Med. Sc.*, Jan., 1922), reports a case of gumma of the liver in a man who had suffered from ascites and hematemesis in yearly attacks for four years. Clinically his condition resembled Banti's Disease.

Acquired syphilis of the pancreas, according to Wile (*Arch. Derm. & Syph.*, Feb., 1921) is one of the rarest of visceral manifestations. While prognosis is unfavorable, complete recovery has been reported following the employment of the usual antisyphilitic treatment.

Furno (*Polyclin.*, March 1, 1922), reports three cases of enlargement of spleen in connection with syphilitic women, with fever in two. Treatment for syphilis was followed by return to normal conditions. Women seem particularly inclined to syphilitic disease of spleen and it may occur at any stage and also in inherited syphilis. Specific treatment is usually effectual in all phases; if not, splenectomy may be required.

Sosnowski, J. C., (*Surg., Gyn. and Ob.*, Nov., 1922), presents a fairly clear picture of syphilis of the uterus. The recognition of this condition with adequate treatment would cure a great many cases which now go on to invalidism. The Wa. R. in many of these cases was negative and, therefore, the diagnosis was not confirmed by laboratory test.

The initial sore as not generally being on the cervix. If, however, it is on the cervix, we find this part of the organ rather soft, congested, with the ulcer surrounded by a bluish areola, and the ulcer covered with dirty looking membrane. The character of the discharge is sero-sanguineous. The second stage, or the stage of congestion and engorgement of the uterus, is called the hyperplastic stage, and the third stage, the hypoplastic or stage of the dry uterus, is the dormant stage. Given a combination of uterine symptoms with other evidences of syphilis, it is wise to try antisyphilitic treatment before operative measures are instituted.

16 Fifth Avenue.

(To be concluded.)

Public Health

Tonsils Found Harboring Diphtheria Bacilli Fifteen Days After Release of Patient From Quarantine

Dr. Frederick W. Sears, Sanitary Supervisor, reports the following instance of the effect of diseased tonsils on the persistence of the diphtheria organism in the throat. Such cases probably are not unique. The source of many secondary cases could probably be traced to similar conditions in the throats of released patients.

"J. M., age 13, was taken ill on June 13 with sore throat; a culture of the throat taken on June 18 was positive for diphtheria. The patient was placed under quarantine. The first culture for release was taken on June 27 and was positive. Positive cultures were obtained June 28, 29 and 30 and July 2. A negative culture was obtained on July 5; positive culture July 7.

"On July 9 and 10 negative cultures were secured from both nose and throat and the patient was released from quarantine on the 10th.

"On July 24 the patient's tonsils and adenoids were removed and cultures were made from the tonsils which proved to be positive for diphtheria bacilli."

Dr. Sears comments on this case as follows:

"The opinion quite generally prevails among the laity and to a certain extent among members of the medical profession that the securing of two negative cultures from the nose and throat of a patient who is convalescing from an attack of diphtheria is a guarantee that the patient will not communicate the disease to others regardless of the clinical manifestations.

"The above case illustrates the danger of accepting this conclusion. With the rapid development of laboratory facilities there has been a growing tendency to place too much reliance on laboratory findings to the exclusion of a careful study of the pathological conditions. Diseased, cryptic tonsils and adenoids, regardless of their size, may harbor active diphtheria bacilli for months and discharge them periodically upon the mucous surface, and yet negative cultures may be secured at intervals, thus giving a false security. . . . Too much reliance should not be placed on two negative diphtheria cultures in the presence of abnormal conditions." (*Health News*, November, 1922.)

Education of Public Health Nurses.

The Public Health Council of New York State has passed a regulation requiring public health nurses appointed after Jan. 1st, 1924, by county and municipal authority to have completed a course of instruction in public health nursing approved by the Public Health Council.

In this connection we call attention to the fact that in co-operation with the New York State Department of Health, The University and Bellevue Hospital Medical College is conducting a correspondence course in public health nursing for the benefit of New York State nurses who are unable to devote the necessary time required to take a residence course of from six to nine months, such as is given in several institutions. The response has been highly satisfactory; two hundred and fifty nurses enrolled for the first course, and there is an equal number already on the waiting list for a subsequent course.

Rural Medical Service

Dr. Matthias Nicoll, Jr., Deputy Commissioner of Health of New York, addressed the conference of Charities and Correction, November 15, 1922, on the subject "Rural Medical Service." He stated that the medical profession is constantly showing less inclination for country practice; that the causes are both economic and psychologic (referring particularly to medical men from rural districts who entered military service, and when discharged therefrom refused to return to country practice, but settled in the cities.) Another cause which he emphasizes for present conditions is the cost of and type of modern medical instruction, which tends more and more toward specialization. The State Department of Health acting as a go-between communities seeking physicians and the medical profession has been able to supply doctors to 58 communities. The majority of which are able to support a physician. Withal Dr. Nicoll states that the residents of rural districts are not receiving as good medical service as are those residing in the cities. He points out the need for small hospitals serving limited communities and which shall be open to all reputable members of the medical profession; universal laboratory service; and increased nursing service.

A Case of Anthrax

From Clyde, New York, there has been reported a case of anthrax acquired through the use of a shaving brush purchased 15 months previously, but not used until Oct. 30, 1922. The following day a pimple appeared on the right cheek. Nov. 6th, he was first seen by a physician and the symptoms were typical of anthrax. On Nov. 7th, 50 cc of serum was administered intravenously with almost immediate improvement and ultimate recovery. The remarkable feature of this case is the recovery in view of the late administration of serum.

A 20th Century Tragedy.

That some members of the medical profession are still thirty years behind the times is shown by a recent tragedy in Central New York. Here in a family of seven children, all of whom were ill with diphtheria, owing to the fact that the attending physician did not believe in antitoxin, there were four deaths; one child received antitoxin at the hands of the health officer and two others recovered spontaneously. The physician considers himself blameless for this deplorable affair, and states ". . . you know that there are children who have been born with such a handicap as to their vitality that when a disease like diphtheria strikes them that they would not recover under any form of treatment."

Malaria.

The New York State Department of Health has recently been investigating the prevalence of malaria in the Hudson River Valley, and to date the result indicates that the disease is very prevalent from just south of Poughkeepsie to Cold Spring on the east bank of the river and in Cornwall on the west side. In addition one or two other foci have been discovered north of Poughkeepsie on the east side.

Some Statistical Observations on Oto-Laryngological Diseases Among Negroes Based on Fifteen Hundred Cases

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Racial peculiarities must ever remain a characteristic of disease. Whether such be due to climate, to civilization, to environments or hereditary influences must be left to a further study of the human race.

In considering the diseases embraced under the term oto-laryngological we will find that the above statement is especially true. It is the purpose of this paper to call attention to the diseased conditions found in the upper respiratory tract among the negro race based upon a study of 1500 cases treated during the last few years at my Clinic in the Atlanta College of Medicine, which was formerly the Atlanta College of Physicians and Surgeons, and now the Medical Department of Emory University.

The study of these cases will show us that the negro race is especially susceptible to certain diseased conditions and almost immune to others. This also is surprising, because the negro race is by no means noted for its cleanliness and often its mode of living and home environments would lead us to expect a certain prevalence of infections and contagious diseases. A close study of these 1500 cases will show some erroneous statements which have previously been made in reference to certain diseased conditions among the negro race.

That a statistical summary of these may be more clearly understood we have divided them into (1) Nasal, (2) Pharyngeal and Laryngeal, (3) Aural.

Nasal

It is surprising how few negroes present themselves for a diseased condition of the nasal cavities. Out of the total of 1500 cases only 341 came for consultation on account of some nasal disease. The following is a summary of the pathologic conditions found:

Deviation of the columnar cartilages.....	1
Atrophic Rhinitis (True Ozena).....	2
Hay Fever.....	2
Acute Abscess of the Maxillary Sinus.....	2
Deviations of the Septum.....	2
Spurs of the Nasal Septum.....	3
Acute Rhinitis.....	15
Acute Frontal, Ethmoidal and Sphenoidal Sinusitis.....	30
Purulent Rhinitis in Children.....	40
Chronic Ethmoiditis with Polypus.....	45
Syphilis, Septum and Outer Wall.....	90
Hypertrophic Rhinitis (Inferior and Middle Turbinate).....	109
Total.....	341

In studying these cases we are struck with some marked peculiarities. Spurs and deviations of the septum are extremely rare. This I believe to be due to two facts:

First in the development of the maxillary bones you rarely ever see the high arched and contracted palate which is so often found associated with deviated septums. In the negro this is seldom seen for a broad face and consequently a broad palate is the usual rule. This fact tends to substantiate

Moscher's argument as to the importance of the pre-maxillary ridge in the causation of septum deviations.

Secondly traumatism as a causal factor in septum deviations is almost universally accepted but in the negro this is greatly minimized by the presence of a protruding brow and a soft flat resilient nose which is less likely to show the marks of a violent encounter.

In the full-blooded negro I have never seen a deviation of the septum, i. e., to the point where one might observe a decided bend, and the only two cases which were seen occurred in mulattoes and gave a history of previous traumatism. This I consider quite remarkable that out of 1500 patients only two should show a deviated septum.

Acute inflammation of the frontal, ethmoidal and sphenoidal sinuses were seen in five cases which was also quite remarkable in comparison to similar cases seen among the white patients. This I attribute to the fact that the nasal cavities in the negro are large and roomy, free from obstructions and consequently offer a perfect drainage for all of the sinuses.

This but exemplifies the fact that acute sinusitis is largely dependent upon the obstructions offered to the natural outflow of the secretions from these cavities. There were only two cases of acute abscess of the maxillary sinus both of which fully recovered thorough natural drainage.

Not a single case of chronic maxillary sinusitis was seen which is also remarkable. While in the South we do not find this condition as frequent perhaps as it occurs in the North yet we do have a number of cases that even come to operation. Negroes as a rule have the most perfect teeth of any race of people and this may in a large measure be the cause of their freedom from antral disease.

Chronic necrosing ethmoiditis with polypus was found in sixty-five cases. This seems remarkable because the acute sinusitis was so rarely found. In nearly every case this condition was associated with a hypertrophy of the inferior turbinates. This hypertrophy was quite characteristic in that the mucous membrane over the turbinates was thick and leathery, presenting a peculiar gelatinous mulberry appearance of a decided anemic color. This condition is quite prevalent among all negroes and yields readily to the treatment by means of the electric cautery. This gelatinous hypertrophy when it involved the middle turbinates very quickly passed into a condition of polypus.

Hay fever was seen in two cases which in no wise differed from the same condition in the whites. Inquiry among my colleagues would lead me to say that hay fever is rare among the negroes.

Atrophic rhinitis was only seen in one case and even here there was an element of doubt with the possibility of its having a specific basis. This also is at variance with the theory of those who hold that a flat roomy nose with large nostrils is the type most usually found where atrophic rhinitis

exists and for this reason they hold that such a nose predisposes one to this disease. The facts as stated by me certainly seem to controvert this theory.

Syphilitic lesions were comparatively frequent and every type of this disease was represented. Unfortunately for this race of people, syphilis seems to have permeated its whole vital system. In a large public clinic one may observe all its various forms both acquired and hereditary. Gummatous destruction of septum and turbinates especially the middle, perforations through the floor of the nose and hard palate, these and every other manifold specific lesion can be found.

I wish to call attention to the frequency of purulent rhinitis in the very young. This always had a syphilitic basis and yielded readily to antisiphilitic remedies. This in a measure controverts the theory of these who hold that atrophic rhinitis is dependent upon a previous purulent rhinitis in children. If this was true we would certainly see very many more of the atrophic cases than are really observed in this race of people.

Diseases of the Pharynx. Epipharynx and Larynx.

1. Vincent's Angina.....	2
2. Complete Atresia of the Pharynx and Nasopharynx.....	2
3. Laryngeal Paralysis.....	3
4. Pharyngeal Diphtheria.....	5
5. Syphilis of Larynx.....	10
6. Elongated Uvula.....	11
7. Chronic Granular Pharyngitis.....	20
8. Hypertrophy of Lingual Tonsil.....	21
9. Laryngeal Tuberculosis.....	23
10. Peri-tonsillar Abscess.....	50
11. Acute Diffused Tonsillitis and Epipharyngitis.....	40
12. Acute Follicular Tonsillitis and Epipharyngitis.....	60
13. Adenoids.....	96
14. Enlarged Faucial Tonsils.....	152
15. Adenoids and Enlarged Faucial Tonsils.....	296
16. Syphilis of Pharynx and Epipharynx.....	270

Total.....1061

In this list there will be found only two cases of laryngeal paralysis and both occurred on the left side as an adductor lesion. They recovered in a few weeks under the use of the iodide of potassium.

I have looked carefully for the various forms of laryngeal paralysis among this race of people because of the prevalence of syphilis in all its forms especially since optic nerve atrophy is so very common, but so far these are the only cases I have ever seen.

Diphtheria is an exceedingly rare disease among the negroes when we realize the fact that during the last year only seven cases were positively recognized among the negroes in Atlanta out of a negro population of 35,000. Only five cases were seen by me out of a total of 1,500 who consulted the clinic for various throat maladies and these presented themselves during the last three years. No case of nasal diphtheria was seen although this form of the disease has been very prevalent among the whites. Consequently there must be some deciding factor which affects more frequently the white race in this disease. More prominent than everything else stands the prevalence of syphilis among these people. It occurred 270 times on the pharynx, tonsils soft palate and epipharynx in all its forms from the initial

lesion (one case) to a gummatous destruction of all the tissues and in one case even involving the bony vertebrae. It was by no means uncommon to have these patients present themselves with an entire destruction of the soft palate and even the hard. Usually these cases never present themselves until a decided destruction has taken place, always relying upon some home remedy to effect a cure and in this way allowing the ravages of syphilis to produce great destruction. It is in these cases of active gummatous destruction that Salvarsan produces such marvelous results.

Syphilis of the larynx was not near so frequent occurring only 10 times out of the total number of cases. This differs somewhat from laryngeal tuberculosis since 20 cases of this disease were seen. Tuberculosis is exceedingly prevalent among the negroes and is one of the most fatal maladies which occurs among them. It is strange therefore that not more cases of laryngeal tuberculosis are not seen in a large out-door clinic where large numbers of negroes come to be treated for every known disease. Several years ago the statement was frequently made and strange to say by some Southern laryngologists that adenoids were rarely found among the negroes. The statistics here published would certainly disapprove such a contention. The fact is adenoids are almost as prevalent among this race as among the white and since the medical inspection of colored schools have been instituted in our city we find our clinics crowded with colored children seeking to be operated upon for the presence of adenoids and enlarged tonsils.

Diseases of the Ear

Aural diseases are not very frequent among the negroes. Out of the total of 1,500 patients only 125 consulted the clinic for some affection of the ears.

Following is a tabulated list:

1. Facial Paralysis.....	1
2. Atresia of the External Canal.....	2
3. Foreign Body in External Canal.....	2
4. Progressive Deafness (So-called Dry Catarrh of Middle Ear).....	3
5. Acute Suppurative Otitis Media.....	5
6. Chronic Catarrhal Otitis Media.....	6
7. Ferunculosis of the Auditory Canal.....	8
8. Chronic Suppurative Otitis Media.....	8
9. Eczema of the Auditory Canal.....	10
10. Otalgia from Reflex Causes, teeth, tonsils, etc.....	13
11. Acute Catarrhal Otitis Media.....	17
12. Tinnitus with Retracted Drums.....	24
13. Cerumen.....	26

Total.....125

Middle ear inflammation is comparatively infrequent among the negro race. This is also true of the white race in our climate as compared with that which occurs in more Northern states. However middle ear disease is noticeably very rare among negroes, especially that form which is usually spoken of as dry catarrh accompanied with gradually increasing deafness. Out of this tabulated series there was only three cases of this kind and in looking back on my clinical experiences of fifteen years in the same clinic, I can recall but very few negroes who presented themselves on account of progressive deafness. This to my mind can only be attributed to unusual free respiratory room in the nasal cavities and the almost absolute freedom from nasal obstruction.

(Concluded over the next page)